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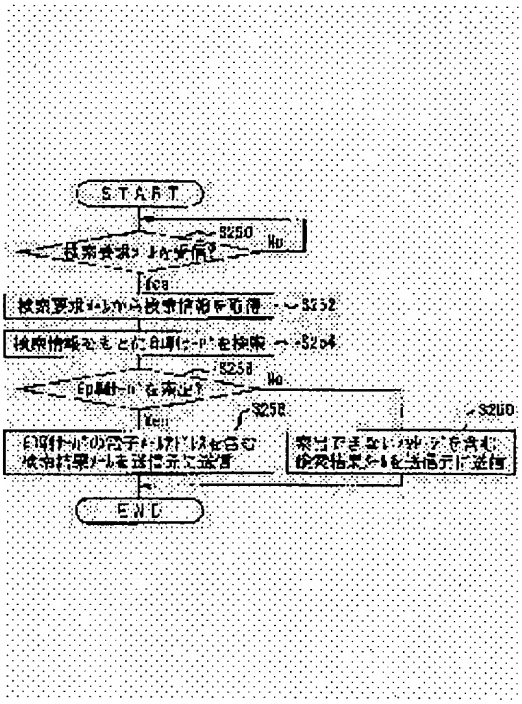
(54) SERVICE USE SUPPORT SYSTEM, RETRIEVAL TERMINAL, PROCESSING TERMINAL, OUTPUT TERMINAL, STORAGE MEDIUM HAVING RETRIEVAL PROGRAM STORED THEREON, AND STORAGE MEDIUM STORED HAVING OUTPUT PROGRAM STORED THEREON

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a service use support system which is advantageous in terms of trouble and time, and which can use network resources.

SOLUTION: When receiving retrieval request mail a retrieval server 200 obtains retrieval information from the received retrieval request mail and retrieves the electronic mail address of a storage device 62, based on the obtained retrieval information. When the electronic mail address of a print server PS corresponding to the retrieval information is found, retrieval result mail which includes the found electronic mail address is sent to the transmission source of the retrieval request mail. When receiving the print-request mail, print servers PS1 to PS2 obtain print format information and print data from the received print request mail and print the print data, based to the obtained print format information.



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CLAIMS

[Claim(s)]
[Claim 1] It has the processing terminal which receives processing demand mail and offers predetermined service, and the retrieval terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said processing terminal is searched based on the retrieval information. It is the system which supports use of the service which said processing terminal offers. Said retrieval terminal The storage means for registering the e-mail address of said processing terminal, and an e-mail transceiver means to transmit and receive data in an electronic mail format, An information acquisition means to acquire information from the electronic mail received with said e-mail transceiver means, When it has a retrieval means to search the e-mail address of said storage means and said e-mail transceiver means receives said retrieval demand mail When the e-mail address of the processing terminal which performs retrieval by said retrieval means based on the retrieval information acquired with said information acquisition means, and corresponds to the retrieval information is ****(ed) The retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of said retrieval demand mail with said e-mail transceiver means. Said processing terminal When it has an e-mail receiving means to receive data in an electronic mail format, and a service provision means to offer said predetermined service and said e-mail receiving means receives said processing demand mail The service use support system characterized by offering service by said service provision means to the transmitting origin of said processing demand mail.
[Claim 2] The printing terminal which receives the output request mail containing output data, and outputs the output data, The retrieval terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said printing terminal is searched based on the retrieval information is connected possible [a communication link]. It is the system which supports use of the output service which said printing terminal offers. Said retrieval terminal The storage means for registering the e-mail address of said printing terminal, and an e-mail transceiver means to transmit and receive data in an electronic mail format, An information acquisition means to acquire information from the electronic mail received with said e-mail transceiver means, When it has a retrieval means to search the e-mail address of said storage means and said e-mail transceiver means receives said retrieval demand mail When the e-mail address of the printing terminal which performs retrieval by said retrieval means based on the retrieval information acquired with said information acquisition means, and corresponds to the retrieval information is ****(ed) The retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of said retrieval demand mail with said e-mail transceiver means. Said printing terminal An e-mail receiving means to receive data in an electronic mail format, and an information acquisition means to acquire information from the electronic mail received with said e-mail receiving means, It is the service use support system characterized by outputting the output data acquired with said information acquisition means to said output means when it has an output means to output data and said e-mail receiving means receives said output request mail.
[Claim 3] In claim 2, said printing terminal has an e-mail transmitting means to transmit data in an electronic mail format. The registration demand mail including the terminal description information which shows the e-mail address of the printing terminal concerned and the description of the printing terminal concerned is transmitted to said retrieval terminal with said e-mail transmitting means. When it has a registration means to match an e-mail address with said terminal description information, and to register with said storage means and said e-mail transceiver means receives said registration demand mail, said retrieval terminal The service use support system characterized by performing registration by said registration means based on the e-mail address and the terminal description information which were

acquired with said information acquisition means.
[Claim 4] It is the service use support system carry out transmitting the guidance mail contain the use guidance information which shows use guidance of the printing terminal concerned with said e-mail transmitting means to the transmitting origin of said guidance demand mail when said printing terminal has an e-mail transmitting means transmit data in an electronic-mail format, in claim 2 and guidance demand mail is received with said e-mail receiving means as the description.
[Claim 5] The e-mail address of a processing terminal which receives processing demand mail and offers predetermined service is registered. It is the terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said processing terminal is searched based on the retrieval information. When it has a storage means for registering the e-mail address of said processing terminal and said retrieval demand mail is received in an electronic mail format From the received retrieval demand mail, acquire said retrieval information and the e-mail address of said storage means is searched based on the acquired retrieval information. It is the retrieval terminal characterized by transmitting the retrieval result mail containing the e-mail address which **** (ed) to the transmitting origin of said retrieval demand mail in an electronic mail format when the e-mail address of the processing terminal applicable to the retrieval information is ****(ed).
[Claim 6] The e-mail address of the printing terminal which receives the output request mail containing output data, and outputs the output data is registered. It is the terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said printing terminal is searched based on the retrieval information. When it has a storage means for registering the e-mail address of said printing terminal and said retrieval demand mail is received in an electronic mail format From the received retrieval demand mail, acquire said retrieval information and the e-mail address of said storage means is searched based on the acquired retrieval information. It is the retrieval terminal characterized by transmitting the retrieval result mail containing the e-mail address which ****(ed) to the transmitting origin of said retrieval demand mail in an electronic mail format when the e-mail address of the printing terminal applicable to the retrieval information is ****(ed).
[Claim 7] When it is the terminal which offers predetermined service and processing demand mail is received in an electronic mail format While offering said predetermined service to the transmitting origin of said processing demand mail, when guidance demand mail is received in an electronic mail format The processing terminal characterized by transmitting the guidance mail including the use guidance information which shows use guidance of the terminal concerned in an electronic mail format to the transmitting origin of said guidance demand mail.
[Claim 8] When it is the terminal which receives the output request mail containing output data, and outputs the output data, it has an output means to output data and said output request mail is received in an electronic mail format While outputting the output data which acquired said output data and were acquired to said output means from the received output request mail, when guidance demand mail is received in an electronic mail format The printing terminal characterized by transmitting the guidance mail including the use guidance information which shows use guidance of the terminal concerned in an electronic mail format to the transmitting origin of said guidance demand mail.
[Claim 9] When it is the storage which memorized the retrieval program applied to a retrieval terminal according to claim 6 and said retrieval demand mail is received in an electronic mail format From the received retrieval demand mail, acquire said retrieval information and the e-mail address of said storage means is searched based on the acquired retrieval information. When the e-mail address of the printing terminal applicable to the retrieval information is ****(ed) The storage which memorized the retrieval program characterized by memorizing the program for making a computer perform processing which transmits the retrieval result mail containing the e-mail address which ****(ed) to the transmitting origin of said retrieval demand mail in an electronic mail format.
[Claim 10] When it is the storage which memorized the output program applied to a printing terminal according to claim 8 and said output request mail is received in an electronic mail format While outputting the output data which acquired said output data and were acquired to said output means from the received output request mail, when guidance demand mail is received in an electronic mail format The storage memorized in the output program characterized by memorizing the program for making a computer perform processing which transmits the guidance mail including the use guidance information which shows use guidance of the terminal concerned in an electronic mail format to the transmitting origin of said guidance demand mail.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] The printing terminal which this invention receives output request mail and outputs the output data, The retrieval terminal with which retrieval demand mail is received and the e-mail address of a printing terminal is searched based on the retrieval information is connected possible [a communication link] in a network. The system which supports use of the output service which a printing terminal offers to the client user on the network, A terminal and a storage are started and it is especially related with the storage which memorized the service use support system which can use a network resource, a retrieval terminal, the processing terminal, the printing terminal, the storage that memorized the retrieval program, and the output program advantageously in respect of time and effort or time amount.
[0002]
[Description of the Prior Art] In order to use conventionally the printing service which a network printer server offers in the client linked to a network, the driver of the proper for controlling a printer is incorporated beforehand, and the application of a client uses such service by communicating with the printer by the incorporated driver, and printing data.
[0003]
[Problem(s) to be Solved by the Invention] However, if it is in the above-mentioned conventional network environment, since it has composition which includes the driver of a printer proper in a client, a driver must be incorporated for every client which is going to use a printer. Moreover, whenever it connects a new printer to a network, a driver must be included in each client. Therefore, it was hard to call it what has the good user-friendliness also for about [that a driver inclusion activity takes time and effort and time amount] and a user. In especially the network environment to which many clients are connected like a network in the company, the time and effort and time amount are huge, in view of the whole.
[0004] Moreover, if it is in the above-mentioned conventional network environment, only the printer connected into the small-scale network where a client belongs (for example, inside of LAN) can be used, and the printer connected to the network of a wide area exceeding the router etc. cannot be used.
[0005] Furthermore it progresses, and even if it can use now the printer connected to the network of a wide area, by the client, it will be thought that the need of acquiring and setting up comes out of the address for pinpointing the location of the printer on a network whenever the location of the printer on a network changes or a new printer is connected to a network. Especially about the network of a wide area, since each managers of a printer differ, if acquiring the address of a printer will acquire the address of about [being difficult] and a large number as compared with a small-scale network, a setup and management will become complicated.
[0006] Not only the printing service whose printer server offers these things but the problem which was similar with this also about the file-sharing service which a file server offers in addition to this, the search service which a database server offers, and the various services using other network resources is assumed.
[0007] Then, this invention is made paying attention to the unsolved technical problem which such a Prior art has, and aims advantageous at offering the storage which memorized the service use support system which can use a network resource, a retrieval terminal, the processing terminal, the printing terminal, the storage that memorized the retrieval program, and the output program in respect of time

and effort or time amount.
[0008]
[Means for Solving the Problem] In order to attain the above-mentioned purpose, the service use support system according to claim 1 concerning this invention It has the processing terminal which receives processing demand mail and offers predetermined service, and the retrieval terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said processing terminal is searched based on the retrieval information. It is the system which supports use of the service which said processing terminal offers. Said retrieval terminal The storage means for registering the e-mail address of said processing terminal, and an e-mail transceiver means to transmit and receive data in an electronic mail format, An information acquisition means to acquire information from the electronic mail received with said e-mail transceiver means, When it has a retrieval means to search the e-mail address of said storage means and said e-mail transceiver means receives said retrieval demand mail When the e-mail address of the processing terminal which performs retrieval by said retrieval means based on the retrieval information acquired with said information acquisition means, and corresponds to the retrieval information is ****(ed) The retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of said retrieval demand mail with said e-mail transceiver means. Said processing terminal When it has an e-mail receiving means to receive data in an electronic mail format, and a service provision means to offer said predetermined service and said e-mail receiving means receives said processing demand mail Service by said service provision means is offered to the transmitting origin of said processing demand mail.
[0009] When it is going to use the service which a processing terminal offers in a client, for example with such a configuration, in a client, the retrieval demand mail including retrieval information is first transmitted to a retrieval terminal in an electronic mail format.
[0010] If an e-mail transceiver means receives retrieval demand mail, the e-mail address of a storage means will be searched with a retrieval terminal based on the retrieval information which retrieval information was acquired from the received retrieval demand mail by the information acquisition means, and was acquired by the retrieval means. Consequently, if the e-mail address of the processing terminal applicable to retrieval information is ****(ed), the retrieval result mail which contains the ****(ed) e-mail address with an e-mail transceiver means will be transmitted to a client in an electronic mail format.
[0011] Next, in a client, if retrieval result mail is received in an electronic mail format, with reference to the e-mail address contained in the received retrieval result mail, processing demand mail will be transmitted to a processing terminal in an electronic mail format.
[0012] At a processing terminal, if an e-mail receiving means receives processing demand mail, predetermined service will be offered to a client by the service provision means.
[0013] Thereby, in a client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a processing terminal, the service which a processing terminal offers can be used.
[0014] Here, as service which a processing terminal offers, the printing service which a printer server offers, the file-sharing service which a file server offers, the search service which a database server offers, and the various services using other network resources are mentioned, for example. Therefore, a printer server, a file server, a database server, and the terminal that controls other network resources are included in a processing terminal. Hereafter, in a retrieval terminal and a processing terminal according to claim 7 according to claim 5, it is the same.
[0015] Moreover, a storage means is every means, and may register an e-mail address at all stages, may register the e-mail address beforehand, and it registers an e-mail address by the input from the outside etc. at the time of actuation of this system, without registering an e-mail address beforehand. Hereafter, in a retrieval terminal according to claim 5, it is the same.
[0016] Moreover, a retrieval terminal may be constituted as one set of a terminal, and may be constituted as a set of the function of two or more sets of terminals. For example, the following configurations are mentioned when it constitutes a retrieval terminal as a set of the function of two sets of terminals.
[0017] Namely, one terminal transmits the retrieval information acquired with the information acquisition means in the end of an other end, when it has an e-mail receiving means and an information acquisition means and an e-mail receiving means receives retrieval demand mail. Retrieval by the retrieval means carries out based on the retrieval information which received when it had an e-mail

transmitting means, a storage means, and a retrieval means and retrieval information was received from one terminal the end of an other end, and when the e-mail address of the processing terminal correspond to the retrieval information ****, the retrieval result mail contain the e-mail address ****(ed) transmits with an e-mail transmitting means to the transmitting origin of retrieval demand mail.
[0018] This is the same also about a processing terminal. Hereafter, in a retrieval terminal and a processing terminal according to claim 7 according to claim 5, it is the same.
[0019] Furthermore, the service use support system according to claim 2 concerning this invention The printing terminal which receives the output request mail containing output data, and outputs the output data, The retrieval terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said printing terminal is searched based on the retrieval information is connected possible [a communication link]. It is the system which supports use of the output service which said printing terminal offers. Said retrieval terminal The storage means for registering the e-mail address of said printing terminal, and an e-mail transceiver means to transmit and receive data in an electronic mail format, An information acquisition means to acquire information from the electronic mail received with said e-mail transceiver means, When it has a retrieval means to search the e-mail address of said storage means and said e-mail transceiver means receives said retrieval demand mail When the e-mail address of the printing terminal which performs retrieval by said retrieval means based on the retrieval information acquired with said information acquisition means, and corresponds to the retrieval information is ****(ed) The retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of said retrieval demand mail with said e-mail transceiver means. Said printing terminal An e-mail receiving means to receive data in an electronic mail format, and an information acquisition means to acquire information from the electronic mail received with said e-mail receiving means, When it has an output means to output data and said e-mail receiving means receives said output request mail, the output data acquired with said information acquisition means are outputted to said output means.
[0020] When it is going to use the output service which a printing terminal offers in a client, for example with such a configuration, in a client, the retrieval demand mail including retrieval information is first transmitted to a retrieval terminal in an electronic mail format.
[0021] If an e-mail transceiver means receives retrieval demand mail, the e-mail address of a storage means will be searched with a retrieval terminal based on the retrieval information which retrieval information was acquired from the received retrieval demand mail by the information acquisition means, and was acquired by the retrieval means. Consequently, if the e-mail address of the printing terminal applicable to retrieval information is ****(ed), the retrieval result mail which contains the ****(ed) e-mail address with an e-mail transceiver means will be transmitted to a client in an electronic mail format.
[0022] Next, in a client, if retrieval result mail is received in an electronic mail format, with reference to the e-mail address contained in the received retrieval result mail, the output request mail containing output data will be transmitted to a printing terminal in an electronic mail format.
[0023] In a printing terminal, if an e-mail receiving means receives output request mail, the output data which output data were acquired from the received output request mail by the information acquisition means, and were acquired by the output means will be outputted.
[0024] Thereby, in a client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a printing terminal, the output service which a printing terminal offers can be used.
[0025] Here, as long as a printing terminal outputs data, it may be what kind of configuration, and the thing equipped with a display means to display data, a sound output means to output data as voice etc., or a printing means to print data is contained in this. Hereafter, in a retrieval terminal and a printing terminal according to claim 8 according to claim 6, it is the same.
[0026] Moreover, a storage means is every means, and may register an e-mail address at all stages, may register the e-mail address beforehand, and it registers an e-mail address by the input from the outside etc. at the time of actuation of this system, without registering an e-mail address beforehand. Hereafter, in a retrieval terminal according to claim 6, it is the same.
[0027] Moreover, a retrieval terminal may be constituted as one set of a terminal, and may be constituted as a set of the function of two or more sets of terminals. For example, the following configurations are mentioned when it constitutes a retrieval terminal as a set of the function of two sets of terminals.

[0028] Namely, one terminal transmits the retrieval information acquired with the information acquisition means in the end of an other end, when it has an e-mail receiving means and an information acquisition means and an e-mail receiving means receives retrieval demand mail. Retrieval by the retrieval means carries out based on the retrieval information received when it had an e-mail transmitting means, a storage means, and a retrieval means and retrieval information was received from one terminal the end of an other end, and when the e-mail address of the printing terminal correspond to the retrieval information ****, the retrieval result mail contain the e-mail address ****(ed) transmits with an e-mail transmitting means to the transmitting origin of retrieval demand mail.
[0029] This is the same also about a printing terminal. Hereafter, in a retrieval terminal and a printing terminal according to claim 8 according to claim 6, it is the same.
[0030] Furthermore, the service use support system according to claim 3 concerning this invention In a service use support system according to claim 2 said printing terminal It has an e-mail transmitting means to transmit data in an electronic mail format, and the registration demand mail including the terminal description information which shows the e-mail address of the printing terminal concerned and the description of the printing terminal concerned is transmitted to said retrieval terminal with said e-mail transmitting means. Said retrieval terminal When it has a registration means to match an e-mail address with said terminal description information, and to register with said storage means and said e-mail transceiver means receives said registration demand mail Registration by said registration means is performed based on the e-mail address and the terminal description information which were acquired with said information acquisition means.
[0031] When it is going to register a new printing terminal into a retrieval terminal with such a configuration, in a printing terminal, the registration demand mail which includes the terminal description information which shows the e-mail address of the printing terminal and the description of the printing terminal with an e-mail transmitting means is transmitted to a retrieval terminal in an electronic mail format.
[0032] At a retrieval terminal, if an e-mail transceiver means receives registration demand mail, an e-mail address and the terminal description information are acquired from the received registration demand mail by the information acquisition means, and by the registration means, the acquired e-mail address will be matched with the terminal description information, and will be registered into a storage means.
[0033] Furthermore, the service use support system according to claim 4 concerning this invention transmits the guidance mail contain the use guidance information which shows use guidance of the printing terminal concerned with said e-mail transmitting means to the transmitting origin of said guidance demand mail in said printing terminal in a service use support system according to claim 2, when it has an e-mail transmitting means transmit data in an electronic-mail format and guidance demand mail receives with said e-mail receiving means.
[0034] With such a configuration, when use guidance of a printing terminal tends to come to hand in a client, by the client, guidance demand mail is first transmitted to a printing terminal in an electronic mail format, for example.
[0035] In a printing terminal, if an e-mail receiving means receives guidance demand mail, the guidance mail which includes the use guidance information which shows use guidance of the printing terminal with an e-mail transmitting means will be transmitted to a client in an electronic mail format.
[0036] Thereby, in a client, even if it does not grasp the usage of a printing terminal beforehand, the output service which a printing terminal offers can be used.
[0037] On the other hand, in order to attain the above-mentioned purpose, the retrieval terminal according to claim 5 concerning this invention The e-mail address of a processing terminal which receives processing demand mail and offers predetermined service is registered. It is the terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said processing terminal is searched based on the retrieval information. When it has a storage means for registering the e-mail address of said processing terminal and said retrieval demand mail is received in an electronic mail format From the received retrieval demand mail, acquire said retrieval information and the e-mail address of said storage means is searched based on the acquired retrieval information. When the e-mail address of the processing terminal applicable to the retrieval information is ****(ed), the retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of said retrieval demand mail in an electronic mail format.
[0038] When it is going to use the service which a processing terminal offers in a client, for example

with such a configuration, in a client, the retrieval demand mail including retrieval information is transmitted to a retrieval terminal in an electronic mail format.

[0039] If retrieval demand mail is received in an electronic mail format, retrieval information will be acquired from the received retrieval demand mail, and the e-mail address of a storage means will be searched with a retrieval terminal based on the acquired retrieval information. Consequently, if the e-mail address of the processing terminal applicable to retrieval information is ****(ed), the retrieval result mail containing the ****(ed) e-mail address will be transmitted to a client in an electronic mail format.

[0040] Thereby, in a client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a processing terminal, the service which a processing terminal offers can be used.

[0041] Furthermore, the retrieval terminal according to claim 6 concerning this invention The e-mail address of the printing terminal which receives the output request mail containing output data, and outputs the output data is registered. It is the terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said printing terminal is searched based on the retrieval information. When it has a storage means for registering the e-mail address of said printing terminal and said retrieval demand mail is received in an electronic mail format From the received retrieval demand mail, acquire said retrieval information and the e-mail address of said storage means is searched based on the acquired retrieval information. When the e-mail address of the printing terminal applicable to the retrieval information is ****(ed), the retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of said retrieval demand mail in an electronic mail format.

[0042] When it is going to use the output service which a printing terminal offers in a client, for example with such a configuration, in a client, the retrieval demand mail including retrieval information is transmitted to a retrieval terminal in an electronic mail format.

[0043] If retrieval demand mail is received in an electronic mail format, retrieval information will be acquired from the received retrieval demand mail, and the e-mail address of a storage means will be searched with a retrieval terminal based on the acquired retrieval information. Consequently, if the e-mail address of the printing terminal applicable to retrieval information is ****(ed), the retrieval result mail containing the ****(ed) e-mail address will be transmitted to a client in an electronic mail format.

[0044] Thereby, in a client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a printing terminal, the output service which a printing terminal offers can be used.

[0045] On the other hand, in order to attain the above-mentioned purpose, the processing terminal according to claim 7 concerning this invention When it is the terminal which offers predetermined service and processing demand mail is received in an electronic mail format While offering said predetermined service to the transmitting origin of said processing demand mail, when guidance demand mail is received in an electronic mail format The guidance mail including the use guidance information which shows use guidance of the terminal concerned is transmitted to the transmitting origin of said guidance demand mail in an electronic mail format.

[0046] When it is going to use the service which a processing terminal offers in a client, for example with such a configuration, in a client, guidance demand mail is first transmitted to a processing terminal in an electronic mail format.

[0047] At a processing terminal, if guidance demand mail is received in an electronic mail format, the guidance mail including the use guidance information which shows use guidance of the processing terminal will be transmitted to a client in an electronic mail format.

[0048] Next, in a client, if guidance mail is received in an electronic mail format, with reference to the use guidance information included in the received guidance mail, processing demand mail will be transmitted to a processing terminal in an electronic mail format according to the use guidance information.

[0049] At a processing terminal, if processing demand mail is received in an electronic mail format, predetermined service will be offered to a client.

[0050] Thereby, in a client, even if it does not grasp the usage of a processing terminal beforehand, the service which a processing terminal offers can be used.

[0051] On the other hand, in order to attain the above-mentioned purpose, the printing terminal according to claim 8 concerning this invention When it is the terminal which receives the output request

mail containing output data, and outputs the output data, it has an output means to output data and said output request mail is received in an electronic mail format While outputting the output data which acquired said output data and were acquired to said output means from the received output request mail, when guidance demand mail is received in an electronic mail format The guidance mail including the use guidance information which shows use guidance of the terminal concerned is transmitted to the transmitting origin of said guidance demand mail in an electronic mail format.
[0052] When it is going to use the output service which a printing terminal offers in a client, for example with such a configuration, in a client, guidance demand mail is first transmitted to a printing terminal in an electronic mail format.
[0053] In a printing terminal, if guidance demand mail is received in an electronic mail format, the guidance mail including the use guidance information which shows use guidance of the printing terminal will be transmitted to a client in an electronic mail format.
[0054] Next, in a client, if guidance mail is received in an electronic mail format, with reference to the use guidance information included in the received guidance mail, the output request mail containing output data will be transmitted to a printing terminal in an electronic mail format according to the use guidance information.
[0055] In a printing terminal, if output request mail is received in an electronic mail format, the output data which output data were acquired from the received output request mail, and were acquired by the output means will be outputted.
[0056] Thereby, in a client, even if it does not grasp the usage of a printing terminal beforehand, the service which a printing terminal offers can be used.
[0057] The storage which, on the other hand, memorized the retrieval program according to claim 9 concerning this invention in order to attain the above-mentioned purpose When it is the storage which memorized the retrieval program applied to a retrieval terminal according to claim 6 and said retrieval demand mail is received in an electronic mail format From the received retrieval demand mail, acquire said retrieval information and the e-mail address of said storage means is searched based on the acquired retrieval information. When the e-mail address of the printing terminal applicable to the retrieval information is ****(ed) It is the storage which memorized the output program which memorized the program for making a computer perform processing which transmits the retrieval result mail containing the e-mail address which ****(ed) to the transmitting origin of said retrieval demand mail in an electronic mail format.
[0058] When it was such a configuration and a computer performs according to the program in which the program memorized by the storage was read in by computer, and was read, an operation equivalent to a retrieval terminal according to claim 6 is acquired.
[0059] The storage which, on the other hand, memorized the output program according to claim 10 concerning this invention in order to attain the above-mentioned purpose When it is the storage which memorized the output program applied to a printing terminal according to claim 8 and said output request mail is received in an electronic mail format While outputting the output data which acquired said output data and were acquired to said output means from the received output request mail, when guidance demand mail is received in an electronic mail format It is the storage which memorized the output program which memorized the program for making a computer perform processing which transmits the guidance mail including the use guidance information which shows use guidance of the terminal concerned in an electronic mail format to the transmitting origin of said guidance demand mail.

[0060] When it was such a configuration and a computer performs according to the program in which the program memorized by the storage was read in by computer, and was read, an operation equivalent to a printing terminal according to claim 8 is acquired.
[0061]
[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained, referring to a drawing. Drawing 1 thru/or drawing 16 are drawings showing the gestalt of the operation of a storage which memorized the service use support system concerning this invention, a retrieval terminal, the processing terminal, the printing terminal, the storage that memorized the retrieval program, and the output program.
[0062] The gestalt of this operation is applied [in / for the storage which memorized the service use support system concerning this invention, a retrieval terminal, the processing terminal, the printing terminal, the storage that memorized the retrieval program, and the output program / a client 100] by

exchanging information by E-mail about the case where the printing service which the printing servers PS1-PSn offer is used, as shown in drawing 1 .
[0063] First, the configuration of the network system which applies this invention is explained, referring to drawing 1 . Drawing 1 is the block diagram showing the configuration of the network system which applies this invention.
[0064] Three networks 402-406 are connected to the network 400 in drawing 1 . Each networks 402-406 are connected to a network 400 through the router which is not illustrated.
[0065] The mail server 150 and the client 100 which has the function which transmits and receives an electronic mail through a mail server 150 are connected to the network 402. Two or more connection of the printing servers PS1-PSn which receive the printing demand mail containing print data, and print the print data is made in the network 404. The retrieval server 200 which receives the retrieval demand mail including retrieval information, and searches the e-mail address of the printing server PS based on the retrieval information is connected to the network 406.
[0066] A mail server 150 transmits the electronic mail concerning the e-mail Request to Send to the destination pinpointed by the appointed e-mail address, when an e-mail Request to Send is received from a client 100. Moreover, the electronic mail addressed to client 100 transmitted is received and accumulated from the outside (the retrieval server 200 or printing servers PS1-PSn), and when an e-mail distribution demand is received from a client 100, the accumulated electronic mail addressed to client 100 is distributed to a client 100.
[0067] Next, the configuration of a client 100 is explained to a detail, referring to drawing 2 . Drawing 2 is the block diagram showing the configuration of a client 100.
[0068] CPU30 which controls an operation and the whole system based on a control program so that a client 100 is shown in drawing 2 , ROM32 which stores the control program of CPU30 etc. in a predetermined field beforehand, RAM34 for storing the result of an operation required of the operation process of data or CPU30 read from the ROM32 grade, CRTC36 which changes into a picture signal the data stored in the specific region of RAM34, and is outputted to a display 44, the bus 39 which is a signal line to consist of I/F38 which carries I/O of data to an external device, and for these transmit data -- mutual -- and it connects possible [data transfer].
[0069] The input device 40 which consists of a keyboard, a mouse, etc. in which an entry of data is possible as a human interface, the storage 42 which stores data, a table, etc. as a file, the display 44 which displays a screen based on a picture signal, and the signal line for connecting with a network 402 are connected to I/F38 as an external device.
[0070] RAM34 has VRAM35 which stores the data for a display for displaying on an indicating equipment 44 as a specific region, and VRAM35 can access it independently by CPU30 and CRTC36.
[0071] CRTC36 reads the data for a display stored in VRAM35 from a start address one by one a predetermined period, changes the read data for a display into a picture signal, and outputs them to a display 44.
[0072] CPU30 consists of a microprocessing unit MPU etc., the predetermined program stored in the predetermined field of ROM32 is started, and the retrieval demand processing, guidance demand processing, and printing demand processing which are shown in the flow chart of drawing 3 thru/or drawing 5 are performed according to the program.
[0073] Introduction and retrieval demand processing are explained to a detail, referring to drawing 3 . Drawing 3 is a flow chart which shows retrieval demand processing.
[0074] Retrieval demand processing is processing which requires retrieval of the printing server PS from the retrieval server 200 by transmitting retrieval demand mail to the retrieval server 200, and if it performs in CPU30, as shown in drawing 3 , it will shift to step S100 first.
[0075] At step S100, the retrieval demand mail including retrieval information is transmitted to the retrieval server 200 in an electronic mail format, and it shifts to step S102, and when it judges whether retrieval result mail was received in the electronic mail format and judged with having received retrieval result mail (Yes), it shifts to step S104.
[0076] When judged with the message of the purport which cannot judge and **** whether the message of the purport which cannot **** the printing server PS concerning a retrieval demand at step S104 is contained in retrieval result mail being contained (Yes), it shifts to step S106, the message of a purport in which the retrieval demand failed is displayed on a display 44, and a series of processings are ended.
[0077] When judged with the message of the purport which, on the other hand, cannot **** the printing server PS concerning a retrieval demand at step S104 not being contained in retrieval result mail, (No)

ends a series of processings. Since the e-mail address of the printing server PS concerning a retrieval demand is contained in retrieval result mail when it ends through step S104, a user can know the e-mail address of the printing server PS concerning a retrieval demand by referring to this.
[0078] When judged with not receiving retrieval result mail in an electronic mail format at step S102, on the other hand, (No) After shifting to step S108 and transmitting retrieval demand mail, when it judges whether predetermined time (for example, 3 minutes) passed and is judged with predetermined time having passed (Yes) It shifts to step S110, the message of a purport in which the retrieval demand failed is displayed on a display 44, and a series of processings are ended.
[0079] On the other hand, at step S108, after transmitting retrieval demand mail, when it is judged with predetermined time having not passed, (No) shifts to step S102.
[0080] Next, guidance demand processing is explained to a detail, referring to drawing 4 . Drawing 4 is a flow chart which shows guidance demand processing.
[0081] Guidance demand processing is processing which requires transmission of use guidance from the printing server PS by transmitting guidance demand mail to the printing server PS ****(ed) by the retrieval server 200, and if it performs in CPU30, as shown to drawing 4 , it will shift to step S130 first.
[0082] At step S130, when transmit mail of an empty message to the printing server PS in an electronic mail format as guidance demand mail, it shifts to step S132, it judges whether guidance mail was received in the electronic mail format and it is judged with having received guidance mail (Yes), a series of processings are ended. Since the use guidance information on the printing server PS is included in guidance mail when it ends through step S132, a user can learn the usage of the printing server PS concerning a retrieval demand by referring to this.
[0083] When judged with not receiving guidance mail in an electronic mail format at step S132, on the other hand, (No) After shifting to step S134 and transmitting guidance demand mail, when it judges whether predetermined time (for example, 3 minutes) passed and is judged with predetermined time having passed (Yes) It shifts to step S136, the message of a purport in which the guidance demand failed is displayed on a display 44, and a series of processings are ended.
[0084] On the other hand, at step S134, after transmitting guidance demand mail, when it is judged with predetermined time having not passed, (No) shifts to step S132.
[0085] Next, printing demand processing is explained to a detail, referring to drawing 5 . Drawing 5 is a flow chart which shows printing demand processing.
[0086] Printing demand processing is processing which requires printing from the printing server PS by transmitting printing demand mail to the printing server PS ****(ed) by the retrieval server 200, and if it performs in CPU30, as shown in drawing 5 , it will shift to step S160 first.
[0087] At step S160, the printing demand mail containing printing formal information and print data is transmitted to the printing server PS in an electronic mail format, and it shifts to step S162, and when it judges whether the completion mail of printing was received in the electronic mail format and judged with having received the completion mail of printing (Yes), it shifts to step S164.
[0088] When judged with the message of the purport which judged and terminated abnormally whether the message of the purport which printing terminated abnormally would be contained in the completion mail of printing at step S164 being contained (Yes), it shifts to step S166, the message of a purport in which the printing demand failed is displayed on a display 44, and a series of processings are ended.
[0089] When judged with on the other hand the message of the purport which printing terminated abnormally not being contained in the completion mail of printing at step S164, (No) ends a series of processings. Since the message of the purport which printing terminated normally is contained in the completion mail of printing when it ends through step S164, a user can know what printing terminated normally by referring to this.
[0090] When judged with not receiving the completion mail of printing in an electronic mail format at step S162, on the other hand, (No) After shifting to step S168 and transmitting printing demand mail, when it judges whether predetermined time (for example, 3 minutes) passed and is judged with predetermined time having passed (Yes) It shifts to step S170, the message of a purport in which the printing demand failed is displayed on a display 44, and a series of processings are ended.
[0091] On the other hand, at step S168, after transmitting printing demand mail, when it is judged with predetermined time having not passed, (No) shifts to step S162.
[0092] Next, the configuration of the retrieval server 200 is explained to a detail, referring to drawing 6 . Drawing 6 is the block diagram showing the configuration of the retrieval server 200.
[0093] CPU50 which controls an operation and the whole system based on a control program so that the

retrieval server 200 is shown in drawing 6 , ROM52 which stores the control program of CPU50 etc. in a predetermined field beforehand, RAM54 for storing the result of an operation required of the operation process of data or CPU50 read from the ROM52 grade, CRTC56 which changes into a picture signal the data stored in the specific region of RAM54, and is outputted to a display 64, the bus 59 which is a signal line to consist of I/F58 which carries I/O of data to an external device, and for these transmit data -- mutual -- and it connects possible [data transfer].

[0094] The input device 60 which consists of a keyboard, a mouse, etc. in which an entry of data is possible as a human interface, the storage 62 which stores data, a table, etc. as a file, the display 64 which displays a screen based on a picture signal, and the signal line for connecting with a network 406 are connected to I/F58 as an external device.

[0095] CPU50 consists of a microprocessing unit MPU etc., the predetermined program stored in the predetermined field of ROM52 is started, and the registration processing and retrieval processing which are shown in the flow chart of drawing 7 and drawing 8 are performed according to the program.

[0096] Introduction and registration processing are explained to a detail, referring to drawing 7 . Drawing 7 is a flow chart which shows registration processing.

[0097] Registration processing is processing which registers the e-mail address of the printing server PS into storage 62 by receiving registration demand mail according to the registration demand, and if it performs in CPU50, as shown in drawing 7 , it will shift to step S200 first. In addition, this registration processing is equivalent to the below-mentioned registration demand processing performed in the printing servers PS1-PSn.

[0098] At step S200, when it judges whether registration demand mail was received in the electronic mail format and judged with having received registration demand mail (Yes), it shifts to step S202, but when judged, (No) stands by at step S200 until it receives registration demand mail.

[0099] At step S202, an e-mail address and the terminal description information are acquired from the received registration demand mail as registration information, and it shifts to step S204, and the acquired e-mail address is matched with the terminal description information, and it registers with storage 62, and shifts to step S206. Therefore, if registration demand mail is received from all the printing servers PS1-PSn, for every printing servers PS1-PSn, the e-mail address of the printing server PS will be matched with the terminal description information which is the printing server PS by the store 62, and will be registered into it.

[0100] At step S206, the completion mail of registration containing the message of the purport which registration completed is transmitted to the transmitting origin of registration demand mail in an electronic mail format, and a series of processings are ended.

[0101] Next, retrieval processing is explained to a detail, referring to drawing 8 . Drawing 8 is a flow chart which shows retrieval processing.

[0102] Retrieval processing is processing which searches the e-mail address of storage 62 by receiving retrieval demand mail according to the retrieval demand, and if it performs in CPU50, as shown in drawing 8 , it will shift to step S250 first. In addition, this retrieval processing is equivalent to the retrieval demand processing performed in a client 100.

[0103] At step S250, when it judges whether retrieval demand mail was received in the electronic mail format and judged with having received retrieval demand mail (Yes), it shifts to step S252, but when judged, (No) stands by at step S250 until it receives retrieval demand mail.

[0104] Retrieval information is acquired from retrieval demand mail, the e-mail address of storage 62 is searched with step S252 based on the retrieval information which shifted to step S254 and was acquired, and it shifts to step S256, and when judged with having ****(ed) the e-mail address of the printing server PS which judges and corresponds [whether the e-mail address of the printing server PS applicable to the retrieval information was ****(ed), and] (Yes), it shifts to step S258.

[0105] At step S258, the retrieval result mail containing the e-mail address of the printing server PS which ****(ed) is transmitted to the transmitting origin of retrieval demand mail in an electronic mail format, and a series of processings are ended.

[0106] When judged with not ****(ing) the e-mail address of the printing server PS which corresponds to retrieval information at step S256 on the other hand, (No) shifts to step S260, the retrieval result mail containing the message of the purport which cannot **** the printing server PS concerning a retrieval demand is transmitted in an electronic mail format to the transmitting origin of retrieval demand mail, and a series of processings are ended.

[0107] Next, the configuration of the printing servers PS1-PSn is explained to a detail, referring to

drawing 9 R> 9. Drawing 9 is the block diagram showing the configuration of the printing server PS 1. In addition, all, since each printing servers PS1-PSn have the same function and are constituted, they explain only the configuration of the printing server PS 1, and omit explanation about other things hereafter.

[0108] CPU70 which controls an operation and the whole system based on a control program so that the printing server PS 1 is shown in drawing 9 , ROM72 which stores the control program of CPU70 etc. in a predetermined field beforehand, RAM74 for storing the result of an operation required of the operation process of data or CPU70 read from the ROM72 grade, CRTC76 which changes into a picture signal the data stored in the specific region of RAM74, and is outputted to a display 84, the bus 79 which is a signal line to consist of I/F78 which carries I/O of data to an external device, and for these transmit data -- mutual -- and it connects possible [data transfer].

[0109] The input device 80 which consists of a keyboard, a mouse, etc. in which an entry of data is possible as a human interface, the store 82 which stores data, a table, etc. as a file, the indicating equipment 84 which displays a screen based on a picture signal, the airline printer 86 which prints data in space, and the signal line for connecting with a network 404 are connected to I/F78 as an external device.

[0110] CPU70 consists of a microprocessing unit MPU etc., the predetermined program stored in the predetermined field of ROM72 is started, and the registration demand processing, guidance transmitting processing, and printing processing which are shown in the flow chart of drawing 10 thru/or drawing 12 are performed according to the program.

[0111] Introduction and registration demand processing are explained to a detail, referring to drawing 10 . Drawing 10 is a flow chart which shows registration demand processing.

[0112] Registration demand processing is processing which requires registration of the printing server PS 1 from the retrieval server 200 by transmitting registration demand mail to the retrieval server 200, and if it performs in CPU70, as shown in drawing 10 , it will shift to step S300 first.

[0113] At step S300, the registration demand mail including registration information is transmitted to the retrieval server 200 in an electronic mail format, and it shifts to step S302. Here, the terminal description information which shows the e-mail address of the printing server PS 1 and the description of the printing server PS 1 is included in registration information.

[0114] At step S302, when it judges whether the completion mail of registration was received in the electronic mail format and judged with having received the completion mail of registration (Yes), a series of processings are ended. Since the message of the purport which registration of the printing server PS 1 completed is contained in the completion mail of registration when it ends through step S302, the manager of the printing server PS 1 can know that registration was completed by referring to this.

[0115] When judged with not receiving the completion mail of registration in an electronic mail format at step S302, on the other hand, (No) After shifting to step S304 and transmitting registration demand mail, when it judges whether predetermined time (for example, 3 minutes) passed and is judged with predetermined time having passed (Yes) It shifts to step S306, the message of a purport in which the registration demand failed is displayed on a display 84, and a series of processings are ended.

[0116] On the other hand, at step S304, after transmitting registration demand mail, when it is judged with predetermined time having not passed, (No) shifts to step S302.

[0117] Next, guidance transmitting processing is explained to a detail, referring to drawing 11 . Drawing 11 is a flow chart which shows guidance transmitting processing.

[0118] It is the processing which transmits use guidance to the transmitting origin of guidance demand mail by receiving guidance demand mail according to the guidance demand, and if guidance transmitting processing is performed in CPU70, as shown to drawing 11 , it will shift to step S330 first. In addition, this guidance transmitting processing is equivalent to the guidance demand processing performed in a client 100.

[0119] At step S330, when it judges whether e-mail was received in the electronic mail format and judged with having received e-mail (Yes), it shifts to step S332, but when judged, (No) stands by at step S330 until it receives e-mail.

[0120] When it judges whether the received mail is an empty message at step S332 and is judged with it being an empty message (Yes), it shifts to step S334, the guidance mail including the use guidance information which shows use guidance of the printing server PS 1 is transmitted to the transmitting origin of e-mail in an electronic mail format, and a series of processings are ended.

[0121] On the other hand, when judged with the received mail not being an empty message at step S332, (No) shifts to step S330.
[0122] Next, printing processing is explained to a detail, referring to drawing 12 . Drawing 12 is a flow chart which shows printing processing.
[0123] Printing processing is processing which prints print data by receiving printing demand mail according to the printing demand, and if it performs in CPU70, as shown in drawing 12 R> 2, it will shift to step S360 first. In addition, this printing processing is equivalent to the printing demand processing performed in a client 100.
[0124] At step S360, when it judges whether printing demand mail was received in the electronic mail format and judged with having received printing demand mail (Yes), it shifts to step S362, but when judged, (No) stands by at step S360 until it receives printing demand mail.
[0125] At step S362, printing formal information and print data are acquired from the received printing demand mail, and it shifts to step S364, and based on the acquired printing formal information, print data are printed with an airline printer 86, and it shifts to step S366.
[0126] The completion mail of printing containing the message of the purport that shifted to step S368 and printing terminated normally with step S366 whether printing was completed normally when it judged and was judged with printing having been completed normally (Yes) is transmitted in an electronic mail format to the transmitting origin of printing demand mail, and a series of processings are ended.
[0127] On the other hand, at step S366, when judged with printing not being completed normally, (No) shifts to step S370, transmits the completion mail of printing containing the message of the purport which printing terminated abnormally in an electronic mail format to the transmitting origin of printing demand mail, and ends a series of processings.
[0128] Next, actuation of the gestalt of the above-mentioned implementation is explained, referring to drawing 13 thru/or drawing 16 .
[0129] The case where introduction and the new printing server PS are registered into the retrieval server 200 is explained referring to drawing 13 . Drawing 13 is drawing showing the contents of registration demand mail.
[0130] When it is going to register the new printing server PS (for example, the printing server PS 1) into the retrieval server 200, in the printing server PS 1, a manager creates the registration demand mail including registration information. Creation of registration demand mail transmits the created registration demand mail to the retrieval server 200 through step S300.
[0131] Registration demand mail is created by indicating "lookup@aaa.com" which is the e-mail address of the retrieval server 200 to the written field 300 of the destination, indicating the character string "register" which shows that it is registration demand mail to the written field 302 of a subject name, and indicating registration information to the written field 304 of a message, as shown in drawing 13 . As registration information, "MailAddress" which shows an e-mail address, and the terminal description information 310 which shows the description of the printing server PS 1 are included. "Location" which shows the installation of a device which offers service as terminal description information 310 with "Name" which shows the name of service, "Device" which shows the class of device which offers service, "Format" which shows the data format which can be printed, and "PaperSize" which shows the paper size which can be printed, for example is contained.
[0132] In the example of drawing 13 , "MailAddress" is set as "printer@xxx.com" which is the e-mail address of the printing server PS 1, and it is set as "PrinterService" which shows that the service whose printing server PS 1 offers "Name" is printing service, and is set as "Printer" which shows that the device which offers service of the printing server PS 1 for "Device" is an airline printer. Moreover, "Format" is set as "jpeg" which shows the data format which can print the printing server PS 1, "PaperSize" is set as "A4" which is the paper size which can print the printing server PS 1, and "Location" is set as "XXX Building" which is the installation of a device which offers service of the printing server PS 1.
[0133] In the retrieval server 200, if registration demand mail is received, through steps S202 and S204, an e-mail address "printer@xxx.com" and the terminal description information are acquired from the received registration demand mail as registration information, and the acquired e-mail address "printer@xxx.com" will be matched with the terminal description information, and will be registered into storage 62. Completion of registration transmits the completion mail of registration containing the message of the purport which registration completed to the printing server PS 1 through step S206.

[0134] In the printing server PS 1, if the completion mail of registration is received, since the message of the purport which registration completed is contained in the received completion mail of registration, a manager can know that registration was completed by referring to this.
[0135] In addition, even if it case or reaches, when [which did not reach to the retrieval server 200 by a certain cause in the registration demand mail transmitted from the printing server PS 1] a defect is in the contents of registration demand mail and registration is not completed in the retrieval server 200, in the printing server PS 1, the message of the purport that the registration demand failed is displayed through step S306. A manager can know what the registration demand went wrong by referring to this.
[0136] Next, the case where the printing server PS is searched in a client 100 using the retrieval server 200 is explained, referring to drawing 14 . Drawing 14 is drawing showing the contents of retrieval demand mail.
[0137] When it is going to search the printing server PS in a client 100 using the retrieval server 200, in a client 100, a user creates the retrieval demand mail including retrieval information. Creation of retrieval demand mail transmits the created retrieval demand mail to the retrieval server 200 through step S100.
[0138] Retrieval demand mail is created by indicating "lookup@aaa.com" which is the e-mail address of the retrieval server 200 to the written field 300 of the destination, indicating the character string "search" which shows that it is retrieval demand mail to the written field 302 of a subject name, and indicating retrieval information to the written field 304 of a message, as shown in drawing 14 . "Device" which shows the class of device which offers the service which it is going to use as retrieval information is contained. Of course, in addition to this, what is contained in the terminal description information 310 can be made into retrieval information, respectively.
[0139] In the example of drawing 14 , it is set as "Printer" which shows that the device which offers the service which is going to use "Device" is an airline printer.
[0140] If retrieval demand mail is received, through steps S252 and S254, retrieval information "Printer" will be acquired from retrieval demand mail, and the e-mail address of storage 62 will be searched with the retrieval server 200 based on the acquired retrieval information. Consequently, as the address of the printing server PS applicable to retrieval information "Printer", if the e-mail address "printer@xxx.com" of the printing server PS 1 should be ****(ed), the retrieval result mail containing the e-mail address "printer@xxx.com" ****(ed) through steps S256 and S258 will be transmitted to a client 100.
[0141] In a client 100, if retrieval result mail is received, since the e-mail address "printer@xxx.com" of the printing server PS concerning a retrieval demand is contained in received retrieval result mail, a user can know the e-mail address of the printing server PS concerning a retrieval demand by referring to this.

[0142] In addition, when the retrieval demand mail transmitted from the client 100 does not reach the retrieval server 200 according to a certain cause, Even if reached, when a defect is in the contents of retrieval demand mail and retrieval is not completed in the retrieval server 200, Or when the e-mail address of the printing server PS applicable to retrieval information is not ****(ed), in a client 100, the message of a purport in which the retrieval demand failed is displayed through step S106 or step S110. A user can know what the retrieval demand went wrong by referring to this.
[0143] Next, the case where the use guidance of the printing server PS 1 searched with the retrieval server 200 in the client 100 comes to hand is explained, referring to drawing 15 . Drawing 15 is drawing showing the contents of guidance mail.
[0144] When the use guidance of the printing server PS 1 searched with the retrieval server 200 in the client 100 tends to come to hand, in a client 100, a user creates guidance demand mail. Creation of guidance demand mail transmits the created guidance demand mail to the printing server PS 1 through step S130. Guidance demand mail is created by indicating "printer@xxx.com" which is the e-mail address of the searched printing server PS 1 retrieval server 200 to the written field of the destination, and indicating nothing to the written field of a message, although not illustrated.
[0145] In the printing server PS 1, reception of mail of an empty message transmits the guidance mail including the use guidance information which shows use guidance of the printing server PS 1 to a client 100 through step S.
[0146] As guidance mail is shown in drawing 15 , the use guidance information 320 is indicated to the written field 304 of a message. "Orientation" which shows the printing direction over a form as use guidance information 320, "PaperSize" which shows the paper size which can be printed, "Number" which shows maximum number of copies which can be printed, and "Layout" which shows a page rate

are contained.
[0147] The example of drawing 15 shows that the printing direction over a form is selectable in a lengthwise direction "portrait" or a longitudinal direction "landscape" as "Orientation". As "PaperSize" It is shown that it is selectable in A4 size "A4" or letter size "Letter". As "Number" It is shown that maximum number of copies which can be printed is "100", and it is shown as "Layout" that it is selectable in one division "1-up", two division "2-up", or trichotomy "3-up." Namely, to the printing server PS 1, a printing format can be specified in this range. In addition, the e-mail address of the printing server PS 1 is set to the reply address, and the input of the e-mail address of the printing server PS 1 can be omitted only by clicking the reply carbon button 306.
[0148] In a client 100, if guidance mail is received, since use guidance information is included in the received completion mail of guidance, a user can learn the usage of the printing server PS 1 by referring to this.
[0149] In addition, even if it case or reaches, when [which did not reach to the printing server PS 1 by a certain cause in the guidance demand mail transmitted from the client 100] a defect is in the contents of guidance demand mail and the printing server PS 1 is not able to transmit guidance mail, in a client 100, the message of the purport that the guidance demand failed is displayed through step S136. A user can know what the guidance demand went wrong by referring to this.
[0150] Next, the case where the printing service which the printing server PS 1 searched with the retrieval server 200 in the client 100 offers is used is explained, referring to drawing 16 . Drawing 16 is drawing showing the contents of printing demand mail.
[0151] When it is going to use the printing service which the printing server PS 1 searched with the retrieval server 200 in the client 100 offers, in a client 100, a user creates the printing demand mail containing printing formal information and print data. Creation of printing demand mail transmits the created printing demand mail to the printing server PS 1 through step S160.
[0152] As printing demand mail is shown in drawing 16 , while indicating "printer@xxx.com" which is the e-mail address of the printing server PS 1 to the written field 300 of the destination, indicating the character string "print" which shows that it is printing demand mail to the written field 302 of a subject name and indicating the printing formal information 330 to the written field 304 of a message, it creates by attaching the file "print-data .jpg" used as print data 332 to the attached item 308. "Orientation" which shows the printing direction over a form as printing formal information, "PaperSize" which shows the paper size which can be printed, "Number" which shows maximum number of copies which can be printed, and "Layout" which shows a page rate are contained.
[0153] It is set as "portrait" which shows that the printing direction [as opposed to a form for "Orientation"] is a lengthwise direction in the example of drawing 16 , is set as "A4" which shows that a paper size is A4 size about "PaperSize", is set as "2" which shows that printing number of copies is the two sections about "Number", and is set as "2-up" which shows that page rates are two division about "Layout."
[0154] In the printing server PS 1, if printing demand mail is received, through steps S362 and S364, printing formal information and print data will be acquired, and print data will be printed with an airline printer 86 based on the acquired printing formal information from the received printing demand mail. After printing is completed normally, the completion mail of printing containing the message of the purport which printing terminated normally is transmitted to a client 100 through steps S366 and S368.
[0155] In a client 100, if the completion mail of printing is received, since the message of the purport which printing terminated normally is contained in the received completion mail of printing, a user can know what printing terminated normally by referring to this.
[0156] In addition, when the printing demand mail transmitted from the client 100 does not reach the printing server PS 1 according to a certain cause, Even if reached, when a defect is in the contents of printing demand mail and printing is not completed in the printing server PS 1, or when printing is not normally completed by the printing server PS 1 In a client 100, the message of a purport in which the printing demand failed is displayed through step S166 or step S170. A user can know what the printing demand went wrong by referring to this.
[0157] With the gestalt of this operation, thus, the retrieval server 200 When retrieval demand mail is received, retrieval information is acquired from the received retrieval demand mail. When the e-mail address of the printing server PS which searches the e-mail address of a store 62 based on the acquired retrieval information, and corresponds to the retrieval information is ****(ed) The retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of retrieval

demand mail. Each printing servers PS1-PS2 When printing demand mail was received, from the received printing demand mail, printing formal information and print data are acquired, and print data were printed based on the acquired printing formal information.

[0158] Thereby, between a client 100 and the printing server PS, since an informational exchange is performed by E-mail, in order to use the printing servers PS1-PSn, and even when the new printing server PS is connected to a network, it is not necessary to incorporate a driver by the client 100. Furthermore, between a client 100 and the printing server PS, since an informational exchange is performed by E-mail, by the client 100, the printing server PS connected to the network of not only a small-scale network but a wide area can be used. Furthermore, in a client 100, if even the e-mail address of the retrieval server 200 is grasped, even if it does not grasp the e-mail address of the printing servers PS1-PSn, the printing service which the printing servers PS1-PSn offer can be used.

[0159] Therefore, as compared with the former, the printing service which the printing servers PS1-PSn offer can be advantageously used in respect of time and effort or time amount.

[0160] With the gestalt of this operation, furthermore, each printing servers PS1-PSn The registration demand mail including the terminal description information which shows the e-mail address of the printing server PS and the description of the printing server PS is transmitted to the retrieval server 200. When registration demand mail was received, the retrieval server 200 matches with the terminal description information the e-mail address which acquired an e-mail address and the terminal description information, and was acquired from the received registration demand mail, and registered it into storage 62.

[0161] Since a setup is not separately needed by the client 100 side even if the new printing server PS is connected to a network while registration of the new printing server PS becomes easy, since the printing server PS is registered into the retrieval server 200 only by transmitting registration demand mail by this, the convenience of a client 100 can be improved.

[0162] Furthermore, when guidance demand mail was received, the guidance mail including the use guidance information which shows use guidance of the printing server PS was made for each printing servers PS1-PSn to transmit to the transmitting origin of guidance demand mail at the gestalt of this operation.

[0163] Thereby, in a client 100, even if it does not grasp beforehand the usage of the printing servers PS1-PSn, the printing service which the printing servers PS1-PSn offer can be used.

[0164] Furthermore, with the gestalt of this operation, each printing servers PS1-PSn set the e-mail address of the printing server PS as the reply address in guidance mail.

[0165] Since the input of the e-mail address of the printing server PS can be omitted by this when creating printing demand mail, the convenience of a client 100 can be improved.

[0166] In the gestalt of the above-mentioned implementation, the retrieval server 200 corresponds to a retrieval terminal according to claim 1, 2, 3, 5, 6, or 9, storage 62 corresponds to a storage means according to claim 1, 2, 3, 5, 6, or 9, and steps S200, S206, S250, S258, and S260 support the e-mail transceiver means according to claim 1, 2, or 3. Moreover, steps S202 and S252 correspond to the information acquisition means of a retrieval terminal according to claim 1, 2, or 3, step S254 corresponds to a retrieval means according to claim 1 or 2, and step S204 supports the registration means according to claim 3.

[0167] Moreover, in the gestalt of the above-mentioned implementation, the printing servers PS1-PSn correspond to a printing terminal claims 1 and 5, a processing terminal given in seven, claims 2, 3, 4, 6, 8, and 9, or given in ten, and steps S302, S330, and S360 support the e-mail receiving means according to claim 1, 2, or 4. Moreover, steps S300, S334, S368, and S370 correspond to an e-mail transmitting means according to claim 3 or 4, an airline printer 84 corresponds to a service provision means according to claim 1, claims 2 and 8, or an output means given in ten, and step S362 supports the information acquisition means of a printing terminal according to claim 2.

[0168] In addition, although the case where the control program with which it is in charge of performing the retrieval demand processing, the guidance demand processing, and the printing demand processing which are shown in the flow chart of drawing 3 thru/or drawing 5 in the gestalt of the above-mentioned implementation with the control program, and the gap is also beforehand stored in ROM32 is performed explained, it may be made the program performing by reading to RAM34 from the storage with which the program not only this but these procedures were shown was memorized.

[0169] Moreover, although the case where the control program with which it is in charge of performing the registration processing and the retrieval processing which are shown in the flow chart of drawing 7

and drawing 8 in the gestalt of the above-mentioned implementation with the control program, and the gap is also beforehand stored in ROM52 was performed was explained, from the storage with which the program which showed not only this but these procedures was memorized, the program is read into RAM54 and it may be made to perform it.
[0170] Moreover, although the case where the control program with which it is in charge of performing the registration demand processing, the guidance transmitting processing, and the printing processing which are shown in the flow chart of drawing 10 thru/or drawing 12 in the gestalt of the above-mentioned implementation with the control program, and the gap is also beforehand stored in ROM72 is performed explained, it may be made the program performing by reading to RAM74 from the storage with which the program shown not only in this but in these procedures was memorized.
[0171] Here, storages are a magnetic storage mold / optical reading method storages, such as optical reading method storages, such as magnetic storage mold storages, such as semi-conductor storages, such as RAM and ROM, and FD, HD, and CD, CDV, LD, DVD, and MO, and if it is the storage which can be read by computer regardless of an approach to read magnetic and optical **, they are electronic and a thing containing all storages.
[0172] Moreover, as shown in drawing 1 , the storage which memorized the service use support system concerning this invention, a retrieval terminal, the processing terminal, the printing terminal, the storage that memorized the retrieval program, and the output program in the gestalt of the above-mentioned implementation In a client 100, although applied about the case where the printing service which the printing servers PS1-PSn offer by exchanging information by E-mail is used, in other cases, it is applicable in the range which does not deviate from the main point of not only this but this invention.
[0173]
[Effect of the Invention] As explained above, in order to use a processing terminal, and even when a new processing terminal is connected to a network, according to the service use support system according to claim 1 concerning this invention, by the client, it is not necessary to incorporate a driver. Furthermore, the processing terminal connected to the network of not only a small-scale network but a wide area can be used. Furthermore, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a processing terminal, the service which a processing terminal offers can be used. Therefore, as compared with the former, the effectiveness that the service which a processing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0174] Furthermore, according to claim 2 concerning this invention thru/or the service use support system given in four, by the client, in order to use a printing terminal, and even when a new printing terminal is connected to a network, it is not necessary to incorporate a driver. Furthermore, the printing terminal connected to the network of not only a small-scale network but a wide area can be used. Furthermore, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a printing terminal, the output service which a printing terminal offers can be used. Therefore, as compared with the former, the effectiveness that the output service which a printing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0175] Furthermore, since a setup is not separately needed by the client side even if a new printing terminal is connected to a network while registration of a new printing terminal becomes easy, since a printing terminal is registered into a retrieval terminal only by transmitting registration demand mail according to the service use support system according to claim 3 concerning this invention, the effectiveness that the convenience of a client can be improved is also acquired.
[0176] Furthermore, according to the service use support system according to claim 4 concerning this invention, by the client, even if it does not grasp the usage of a printing terminal beforehand, the effectiveness that the output service which a printing terminal offers can be used is also acquired.
[0177] On the other hand, according to the retrieval terminal according to claim 5 concerning this invention, by the client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a processing terminal, the service which a processing terminal offers can be used. Therefore, as compared with the former, the effectiveness that the service which a processing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0178] Furthermore, according to the retrieval terminal according to claim 6 concerning this invention, by the client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a printing terminal, the output service which a printing terminal offers can be used. Therefore, as compared with the former, the effectiveness that the output service which a printing

terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0179] On the other hand, according to the processing terminal according to claim 7 concerning this invention, by the client, in order to use a processing terminal, and even when a new processing terminal is connected to a network, it is not necessary to incorporate a driver. Furthermore, the processing terminal connected to the network of not only a small-scale network but a wide area can be used. Therefore, as compared with the former, the effectiveness that the service which a processing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0180] On the other hand, according to the printing terminal according to claim 8 concerning this invention, by the client, in order to use a printing terminal, and even when a new printing terminal is connected to a network, it is not necessary to incorporate a driver. Furthermore, the printing terminal connected to the network of not only a small-scale network but a wide area can be used. Therefore, as compared with the former, the effectiveness that the output service which a printing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0181] According to the storage which, on the other hand, memorized the retrieval program according to claim 9 concerning this invention, effectiveness equivalent to a retrieval terminal according to claim 6 is acquired.
[0182] According to the storage which, on the other hand, memorized the output program according to claim 10 concerning this invention, effectiveness equivalent to a printing terminal according to claim 8 is acquired.

[Translation done.]

TECHNICAL FIELD

[Field of the Invention] The printing terminal which this invention receives output request mail and outputs the output data, The retrieval terminal with which retrieval demand mail is received and the e-mail address of a printing terminal is searched based on the retrieval information is connected possible [a communication link] in a network. The system which supports use of the output service which a printing terminal offers to the client user on the network, A terminal and a storage are started and it is especially related with the storage which memorized the service use support system which can use a network resource, a retrieval terminal, the processing terminal, the printing terminal, the storage that memorized the retrieval program, and the output program advantageously in respect of time and effort or time amount.

[Translation done.]

PRIOR ART

[Description of the Prior Art] In order to use conventionally the printing service which a network printer server offers in the client linked to a network, the driver of the proper for controlling a printer is incorporated beforehand, and the application of a client uses such service by communicating with the printer by the incorporated driver, and printing data.

[Translation done.]

EFFECT OF THE INVENTION

[Effect of the Invention] As explained above, in order to use a processing terminal, and even when a new processing terminal is connected to a network, according to the service use support system according to claim 1 concerning this invention, by the client, it is not necessary to incorporate a driver. Furthermore, the processing terminal connected to the network of not only a small-scale network but a wide area can be used. Furthermore, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a processing terminal, the service which a processing terminal offers can be used. Therefore, as compared with the former, the effectiveness that the service which a processing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0174] Furthermore, according to claim 2 concerning this invention thru/or the service use support system given in four, by the client, in order to use a printing terminal, and even when a new printing terminal is connected to a network, it is not necessary to incorporate a driver. Furthermore, the printing terminal connected to the network of not only a small-scale network but a wide area can be used. Furthermore, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a printing terminal, the output service which a printing terminal offers can be used. Therefore, as compared with the former, the effectiveness that the output service which a printing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0175] Furthermore, since a setup is not separately needed by the client side even if a new printing terminal is connected to a network while registration of a new printing terminal becomes easy, since a printing terminal is registered into a retrieval terminal only by transmitting registration demand mail according to the service use support system according to claim 3 concerning this invention, the effectiveness that the convenience of a client can be improved is also acquired.
[0176] Furthermore, according to the service use support system according to claim 4 concerning this invention, by the client, even if it does not grasp the usage of a printing terminal beforehand, the effectiveness that the output service which a printing terminal offers can be used is also acquired.
[0177] On the other hand, according to the retrieval terminal according to claim 5 concerning this invention, by the client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a processing terminal, the service which a processing terminal offers can be used. Therefore, as compared with the former, the effectiveness that the service which a processing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0178] Furthermore, according to the retrieval terminal according to claim 6 concerning this invention, by the client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a printing terminal, the output service which a printing terminal offers can be used. Therefore, as compared with the former, the effectiveness that the output service which a printing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0179] On the other hand, according to the processing terminal according to claim 7 concerning this invention, by the client, in order to use a processing terminal, and even when a new processing terminal is connected to a network, it is not necessary to incorporate a driver. Furthermore, the processing terminal connected to the network of not only a small-scale network but a wide area can be used. Therefore, as compared with the former, the effectiveness that the service which a processing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.
[0180] On the other hand, according to the printing terminal according to claim 8 concerning this invention, by the client, in order to use a printing terminal, and even when a new printing terminal is

connected to a network, it is not necessary to incorporate a driver. Furthermore, the printing terminal connected to the network of not only a small-scale network but a wide area can be used. Therefore, as compared with the former, the effectiveness that the output service which a printing terminal offers can be used is advantageously acquired in respect of time and effort or time amount.

[0181] According to the storage which, on the other hand, memorized the retrieval program according to claim 9 concerning this invention, effectiveness equivalent to a retrieval terminal according to claim 6 is acquired.

[0182] According to the storage which, on the other hand, memorized the output program according to claim 10 concerning this invention, effectiveness equivalent to a printing terminal according to claim 8 is acquired.

[Translation done.]

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, if it is in the above-mentioned conventional network environment, since it has composition which includes the driver of a printer proper in a client, a driver must be incorporated for every client which is going to use a printer. Moreover, whenever it connects a new printer to a network, a driver must be included in each client. Therefore, it was hard to call it what has the good user-friendliness also for about [that a driver inclusion activity takes time and effort and time amount] and a user. In especially the network environment to which many clients are connected like a network in the company, the time and effort and time amount are huge, in view of the whole.

[0004] Moreover, if it is in the above-mentioned conventional network environment, only the printer connected into the small-scale network where a client belongs (for example, inside of LAN) can be used, and the printer connected to the network of a wide area exceeding the router etc. cannot be used.

[0005] Furthermore it progresses, and even if it can use now the printer connected to the network of a wide area, by the client, it will be thought that the need of acquiring and setting up comes out of the address for pinpointing the location of the printer on a network whenever the location of the printer on a network changes or a new printer is connected to a network. Especially about the network of a wide area, since each managers of a printer differ, if acquiring the address of a printer will acquire the address of about [being difficult] and a large number as compared with a small-scale network, a setup and management will become complicated.

[0006] Not only the printing service whose printer server offers these things but the problem which was similar with this also about the file-sharing service which a file server offers in addition to this, the search service which a database server offers, and the various services using other network resources is assumed.

[0007] Then, this invention is made paying attention to the unsolved technical problem which such a Prior art has, and aims advantageous at offering the storage which memorized the service use support system which can use a network resource, a retrieval terminal, the processing terminal, the printing terminal, the storage that memorized the retrieval program, and the output program in respect of time and effort or time amount.

[Translation done.]

MEANS

[Means for Solving the Problem] In order to attain the above-mentioned purpose, the service use support system according to claim 1 concerning this invention It has the processing terminal which receives processing demand mail and offers predetermined service, and the retrieval terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said processing terminal is searched based on the retrieval information. It is the system which supports use of the service which said processing terminal offers. Said retrieval terminal The storage means for registering the e-mail address of said processing terminal, and an e-mail transceiver means to transmit and receive data in an electronic mail format, An information acquisition means to acquire information from the electronic mail received with said e-mail transceiver means, When it has a retrieval means to search the e-mail address of said storage means and said e-mail transceiver means receives said retrieval demand mail When the e-mail address of the processing terminal which performs retrieval by said retrieval means based on the retrieval information acquired with said information acquisition means, and corresponds to the retrieval information is ****(ed) The retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of said retrieval demand mail with said e-mail transceiver means. Said processing terminal When it has an e-mail receiving means to receive data in an electronic mail format, and a service provision means to offer said predetermined service and said e-mail receiving means receives said processing demand mail Service by said service provision means is offered to the transmitting origin of said processing demand mail.
[0009] When it is going to use the service which a processing terminal offers in a client, for example with such a configuration, in a client, the retrieval demand mail including retrieval information is first transmitted to a retrieval terminal in an electronic mail format.
[0010] If an e-mail transceiver means receives retrieval demand mail, the e-mail address of a storage means will be searched with a retrieval terminal based on the retrieval information which retrieval information was acquired from the received retrieval demand mail by the information acquisition means, and was acquired by the retrieval means. Consequently, if the e-mail address of the processing terminal applicable to retrieval information is ****(ed), the retrieval result mail which contains the ****(ed) e-mail address with an e-mail transceiver means will be transmitted to a client in an electronic mail format.
[0011] Next, in a client, if retrieval result mail is received in an electronic mail format, with reference to the e-mail address contained in the received retrieval result mail, processing demand mail will be transmitted to a processing terminal in an electronic mail format.
[0012] At a processing terminal, if an e-mail receiving means receives processing demand mail, predetermined service will be offered to a client by the service provision means.
[0013] Thereby, in a client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a processing terminal, the service which a processing terminal offers can be used.
[0014] Here, as service which a processing terminal offers, the printing service which a printer server offers, the file-sharing service which a file server offers, the search service which a database server offers, and the various services using other network resources are mentioned, for example. Therefore, a printer server, a file server, a database server, and the terminal that controls other network resources are included in a processing terminal. Hereafter, in a retrieval terminal and a processing terminal according to claim 7 according to claim 5, it is the same.
[0015] Moreover, a storage means is every means, and may register an e-mail address at all stages, may

register the e-mail address beforehand, and it registers an e-mail address by the input from the outside etc. at the time of actuation of this system, without registering an e-mail address beforehand. Hereafter, in a retrieval terminal according to claim 5, it is the same.
[0016] Moreover, a retrieval terminal may be constituted as one set of a terminal, and may be constituted as a set of the function of two or more sets of terminals. For example, the following configurations are mentioned when it constitutes a retrieval terminal as a set of the function of two sets of terminals.
[0017] Namely, one terminal transmits the retrieval information acquired with the information acquisition means in the end of an other end, when it has an e-mail receiving means and an information acquisition means and an e-mail receiving means receives retrieval demand mail. Retrieval by the retrieval means carries out based on the retrieval information which received when it had an e-mail transmitting means, a storage means, and a retrieval means and retrieval information was received from one terminal the end of an other end, and when the e-mail address of the processing terminal correspond to the retrieval information ****, the retrieval result mail contain the e-mail address ****(ed) transmits with an e-mail transmitting means to the transmitting origin of retrieval demand mail.
[0018] This is the same also about a processing terminal. Hereafter, in a retrieval terminal and a processing terminal according to claim 7 according to claim 5, it is the same.
[0019] Furthermore, the service use support system according to claim 2 concerning this invention The printing terminal which receives the output request mail containing output data, and outputs the output data, The retrieval terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said printing terminal is searched based on the retrieval information is connected possible [a communication link]. It is the system which supports use of the output service which said printing terminal offers. Said retrieval terminal The storage means for registering the e-mail address of said printing terminal, and an e-mail transceiver means to transmit and receive data in an electronic mail format, An information acquisition means to acquire information from the electronic mail received with said e-mail transceiver means, When it has a retrieval means to search the e-mail address of said storage means and said e-mail transceiver means receives said retrieval demand mail When the e-mail address of the printing terminal which performs retrieval by said retrieval means based on the retrieval information acquired with said information acquisition means, and corresponds to the retrieval information is ****(ed) The retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of said retrieval demand mail with said e-mail transceiver means. Said printing terminal An e-mail receiving means to receive data in an electronic mail format, and an information acquisition means to acquire information from the electronic mail received with said e-mail receiving means, When it has an output means to output data and said e-mail receiving means receives said output request mail, the output data acquired with said information acquisition means are outputted to said output means.
[0020] When it is going to use the output service which a printing terminal offers in a client, for example with such a configuration, in a client, the retrieval demand mail including retrieval information is first transmitted to a retrieval terminal in an electronic mail format.
[0021] If an e-mail transceiver means receives retrieval demand mail, the e-mail address of a storage means will be searched with a retrieval terminal based on the retrieval information which retrieval information was acquired from the received retrieval demand mail by the information acquisition means, and was acquired by the retrieval means. Consequently, if the e-mail address of the printing terminal applicable to retrieval information is ****(ed), the retrieval result mail which contains the ****(ed) e-mail address with an e-mail transceiver means will be transmitted to a client in an electronic mail format.
[0022] Next, in a client, if retrieval result mail is received in an electronic mail format, with reference to the e-mail address contained in the received retrieval result mail, the output request mail containing output data will be transmitted to a printing terminal in an electronic mail format.
[0023] In a printing terminal, if an e-mail receiving means receives output request mail, the output data which output data were acquired from the received output request mail by the information acquisition means, and were acquired by the output means will be outputted.
[0024] Thereby, in a client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a printing terminal, the output service which a printing terminal offers can be used.
[0025] Here, as long as a printing terminal outputs data, it may be what kind of configuration, and the

thing equipped with a display means to display data, a sound output means to output data as voice etc., or a printing means to print data is contained in this. Hereafter, in a retrieval terminal and a printing terminal according to claim 8 according to claim 6, it is the same.
[0026] Moreover, a storage means is every means, and may register an e-mail address at all stages, may register the e-mail address beforehand, and it registers an e-mail address by the input from the outside etc. at the time of actuation of this system, without registering an e-mail address beforehand. Hereafter, in a retrieval terminal according to claim 6, it is the same.
[0027] Moreover, a retrieval terminal may be constituted as one set of a terminal, and may be constituted as a set of the function of two or more sets of terminals. For example, the following configurations are mentioned when it constitutes a retrieval terminal as a set of the function of two sets of terminals.
[0028] Namely, one terminal transmits the retrieval information acquired with the information acquisition means in the end of an other end, when it has an e-mail receiving means and an information acquisition means and an e-mail receiving means receives retrieval demand mail. Retrieval by the retrieval means carries out based on the retrieval information received when it had an e-mail transmitting means, a storage means, and a retrieval means and retrieval information was received from one terminal the end of an other end, and when the e-mail address of the printing terminal correspond to the retrieval information ****, the retrieval result mail contain the e-mail address ****(ed) transmits with an e-mail transmitting means to the transmitting origin of retrieval demand mail.
[0029] This is the same also about a printing terminal. Hereafter, in a retrieval terminal and a printing terminal according to claim 8 according to claim 6, it is the same.
[0030] Furthermore, the service use support system according to claim 3 concerning this invention In a service use support system according to claim 2 said printing terminal It has an e-mail transmitting means to transmit data in an electronic mail format, and the registration demand mail including the terminal description information which shows the e-mail address of the printing terminal concerned and the description of the printing terminal concerned is transmitted to said retrieval terminal with said e-mail transmitting means. Said retrieval terminal When it has a registration means to match an e-mail address with said terminal description information, and to register with said storage means and said e-mail transceiver means receives said registration demand mail Registration by said registration means is performed based on the e-mail address and the terminal description information which were acquired with said information acquisition means.
[0031] When it is going to register a new printing terminal into a retrieval terminal with such a configuration, in a printing terminal, the registration demand mail which includes the terminal description information which shows the e-mail address of the printing terminal and the description of the printing terminal with an e-mail transmitting means is transmitted to a retrieval terminal in an electronic mail format.
[0032] At a retrieval terminal, if an e-mail transceiver means receives registration demand mail, an e-mail address and the terminal description information are acquired from the received registration demand mail by the information acquisition means, and by the registration means, the acquired e-mail address will be matched with the terminal description information, and will be registered into a storage means.
[0033] Furthermore, the service use support system according to claim 4 concerning this invention transmits the guidance mail contain the use guidance information which shows use guidance of the printing terminal concerned with said e-mail transmitting means to the transmitting origin of said guidance demand mail in said printing terminal in a service use support system according to claim 2, when it has an e-mail transmitting means transmit data in an electronic-mail format and guidance demand mail receives with said e-mail receiving means.
[0034] With such a configuration, when use guidance of a printing terminal tends to come to hand in a client, by the client, guidance demand mail is first transmitted to a printing terminal in an electronic mail format, for example.
[0035] In a printing terminal, if an e-mail receiving means receives guidance demand mail, the guidance mail which includes the use guidance information which shows use guidance of the printing terminal with an e-mail transmitting means will be transmitted to a client in an electronic mail format.
[0036] Thereby, in a client, even if it does not grasp the usage of a printing terminal beforehand, the output service which a printing terminal offers can be used.
[0037] On the other hand, in order to attain the above-mentioned purpose, the retrieval terminal

according to claim 5 concerning this invention The e-mail address of a processing terminal which receives processing demand mail and offers predetermined service is registered. It is the terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said processing terminal is searched based on the retrieval information. When it has a storage means for registering the e-mail address of said processing terminal and said retrieval demand mail is received in an electronic mail format From the received retrieval demand mail, acquire said retrieval information and the e-mail address of said storage means is searched based on the acquired retrieval information. When the e-mail address of the processing terminal applicable to the retrieval information is ****(ed), the retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of said retrieval demand mail in an electronic mail format.

[0038] When it is going to use the service which a processing terminal offers in a client, for example with such a configuration, in a client, the retrieval demand mail including retrieval information is transmitted to a retrieval terminal in an electronic mail format.

[0039] If retrieval demand mail is received in an electronic mail format, retrieval information will be acquired from the received retrieval demand mail, and the e-mail address of a storage means will be searched with a retrieval terminal based on the acquired retrieval information. Consequently, if the e-mail address of the processing terminal applicable to retrieval information is ****(ed), the retrieval result mail containing the ****(ed) e-mail address will be transmitted to a client in an electronic mail format.

[0040] Thereby, in a client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a processing terminal, the service which a processing terminal offers can be used.

[0041] Furthermore, the retrieval terminal according to claim 6 concerning this invention The e-mail address of the printing terminal which receives the output request mail containing output data, and outputs the output data is registered. It is the terminal with which the retrieval demand mail including retrieval information is received, and the e-mail address of said printing terminal is searched based on the retrieval information. When it has a storage means for registering the e-mail address of said printing terminal and said retrieval demand mail is received in an electronic mail format From the received retrieval demand mail, acquire said retrieval information and the e-mail address of said storage means is searched based on the acquired retrieval information. When the e-mail address of the printing terminal applicable to the retrieval information is ****(ed), the retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of said retrieval demand mail in an electronic mail format.

[0042] When it is going to use the output service which a printing terminal offers in a client, for example with such a configuration, in a client, the retrieval demand mail including retrieval information is transmitted to a retrieval terminal in an electronic mail format.

[0043] If retrieval demand mail is received in an electronic mail format, retrieval information will be acquired from the received retrieval demand mail, and the e-mail address of a storage means will be searched with a retrieval terminal based on the acquired retrieval information. Consequently, if the e-mail address of the printing terminal applicable to retrieval information is ****(ed), the retrieval result mail containing the ****(ed) e-mail address will be transmitted to a client in an electronic mail format.

[0044] Thereby, in a client, if even the e-mail address of a retrieval terminal is grasped, even if it does not grasp the e-mail address of a printing terminal, the output service which a printing terminal offers can be used.

[0045] On the other hand, in order to attain the above-mentioned purpose, the processing terminal according to claim 7 concerning this invention When it is the terminal which offers predetermined service and processing demand mail is received in an electronic mail format While offering said predetermined service to the transmitting origin of said processing demand mail, when guidance demand mail is received in an electronic mail format The guidance mail including the use guidance information which shows use guidance of the terminal concerned is transmitted to the transmitting origin of said guidance demand mail in an electronic mail format.

[0046] When it is going to use the service which a processing terminal offers in a client, for example with such a configuration, in a client, guidance demand mail is first transmitted to a processing terminal in an electronic mail format.

[0047] At a processing terminal, if guidance demand mail is received in an electronic mail format, the guidance mail including the use guidance information which shows use guidance of the processing

terminal will be transmitted to a client in an electronic mail format.
[0048] Next, in a client, if guidance mail is received in an electronic mail format, with reference to the use guidance information included in the received guidance mail, processing demand mail will be transmitted to a processing terminal in an electronic mail format according to the use guidance information.
[0049] At a processing terminal, if processing demand mail is received in an electronic mail format, predetermined service will be offered to a client.
[0050] Thereby, in a client, even if it does not grasp the usage of a processing terminal beforehand, the service which a processing terminal offers can be used.
[0051] On the other hand, in order to attain the above-mentioned purpose, the printing terminal according to claim 8 concerning this invention When it is the terminal which receives the output request mail containing output data, and outputs the output data, it has an output means to output data and said output request mail is received in an electronic mail format While outputting the output data which acquired said output data and were acquired to said output means from the received output request mail, when guidance demand mail is received in an electronic mail format The guidance mail including the use guidance information which shows use guidance of the terminal concerned is transmitted to the transmitting origin of said guidance demand mail in an electronic mail format.
[0052] When it is going to use the output service which a printing terminal offers in a client, for example with such a configuration, in a client, guidance demand mail is first transmitted to a printing terminal in an electronic mail format.
[0053] In a printing terminal, if guidance demand mail is received in an electronic mail format, the guidance mail including the use guidance information which shows use guidance of the printing terminal will be transmitted to a client in an electronic mail format.
[0054] Next, in a client, if guidance mail is received in an electronic mail format, with reference to the use guidance information included in the received guidance mail, the output request mail containing output data will be transmitted to a printing terminal in an electronic mail format according to the use guidance information.
[0055] In a printing terminal, if output request mail is received in an electronic mail format, the output data which output data were acquired from the received output request mail, and were acquired by the output means will be outputted.
[0056] Thereby, in a client, even if it does not grasp the usage of a printing terminal beforehand, the service which a printing terminal offers can be used.
[0057] The storage which, on the other hand, memorized the retrieval program according to claim 9 concerning this invention in order to attain the above-mentioned purpose When it is the storage which memorized the retrieval program applied to a retrieval terminal according to claim 6 and said retrieval demand mail is received in an electronic mail format From the received retrieval demand mail, acquire said retrieval information and the e-mail address of said storage means is searched based on the acquired retrieval information. When the e-mail address of the printing terminal applicable to the retrieval information is ****(ed) It is the storage which memorized the output program which memorized the program for making a computer perform processing which transmits the retrieval result mail containing the e-mail address which ****(ed) to the transmitting origin of said retrieval demand mail in an electronic mail format.
[0058] When it was such a configuration and a computer performs according to the program in which the program memorized by the storage was read in by computer, and was read, an operation equivalent to a retrieval terminal according to claim 6 is acquired.
[0059] The storage which, on the other hand, memorized the output program according to claim 10 concerning this invention in order to attain the above-mentioned purpose When it is the storage which memorized the output program applied to a printing terminal according to claim 8 and said output request mail is received in an electronic mail format While outputting the output data which acquired said output data and were acquired to said output means from the received output request mail, when guidance demand mail is received in an electronic mail format It is the storage which memorized the output program which memorized the program for making a computer perform processing which transmits the guidance mail including the use guidance information which shows use guidance of the terminal concerned in an electronic mail format to the transmitting origin of said guidance demand mail.

[0060] When it was such a configuration and a computer performs according to the program in which

the program memorized by the storage was read in by computer, and was read, an operation equivalent to a printing terminal according to claim 8 is acquired.
[0061]
[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained, referring to a drawing. Drawing 1 thru/or drawing 16 are drawings showing the gestalt of the operation of a storage which memorized the service use support system concerning this invention, a retrieval terminal, the processing terminal, the printing terminal, the storage that memorized the retrieval program, and the output program.
[0062] The gestalt of this operation is applied [in / for the storage which memorized the service use support system concerning this invention, a retrieval terminal, the processing terminal, the printing terminal, the storage that memorized the retrieval program, and the output program / a client 100] by exchanging information by E-mail about the case where the printing service which the printing servers PS1-PSn offer is used, as shown in drawing 1 .
[0063] First, the configuration of the network system which applies this invention is explained, referring to drawing 1 . Drawing 1 is the block diagram showing the configuration of the network system which applies this invention.
[0064] Three networks 402-406 are connected to the network 400 in drawing 1 . Each networks 402-406 are connected to a network 400 through the router which is not illustrated.
[0065] The mail server 150 and the client 100 which has the function which transmits and receives an electronic mail through a mail server 150 are connected to the network 402. Two or more connection of the printing servers PS1-PSn which receive the printing demand mail containing print data, and print the print data is made in the network 404. The retrieval server 200 which receives the retrieval demand mail including retrieval information, and searches the e-mail address of the printing server PS based on the retrieval information is connected to the network 406.
[0066] A mail server 150 transmits the electronic mail concerning the e-mail Request to Send to the destination pinpointed by the appointed e-mail address, when an e-mail Request to Send is received from a client 100. Moreover, the electronic mail addressed to client 100 transmitted is received and accumulated from the outside (the retrieval server 200 or printing servers PS1-PSn), and when an e-mail distribution demand is received from a client 100, the accumulated electronic mail addressed to client 100 is distributed to a client 100.
[0067] Next, the configuration of a client 100 is explained to a detail, referring to drawing 2 . Drawing 2 is the block diagram showing the configuration of a client 100.
[0068] CPU30 which controls an operation and the whole system based on a control program so that a client 100 is shown in drawing 2 , ROM32 which stores the control program of CPU30 etc. in a predetermined field beforehand, RAM34 for storing the result of an operation required of the operation process of data or CPU30 read from the ROM32 grade, CRTC36 which changes into a picture signal the data stored in the specific region of RAM34, and is outputted to a display 44, the bus 39 which is a signal line to consist of I/F38 which carries I/O of data to an external device, and for these transmit data -- mutual -- and it connects possible [data transfer].
[0069] The input device 40 which consists of a keyboard, a mouse, etc. in which an entry of data is possible as a human interface, the storage 42 which stores data, a table, etc. as a file, the display 44 which displays a screen based on a picture signal, and the signal line for connecting with a network 402 are connected to I/F38 as an external device.
[0070] RAM34 has VRAM35 which stores the data for a display for displaying on an indicating equipment 44 as a specific region, and VRAM35 can access it independently by CPU30 and CRTC36.
[0071] CRTC36 reads the data for a display stored in VRAM35 from a start address one by one a predetermined period, changes the read data for a display into a picture signal, and outputs them to a display 44.
[0072] CPU30 consists of a microprocessing unit MPU etc., the predetermined program stored in the predetermined field of ROM32 is started, and the retrieval demand processing, guidance demand processing, and printing demand processing which are shown in the flow chart of drawing 3 thru/or drawing 5 are performed according to the program.
[0073] Introduction and retrieval demand processing are explained to a detail, referring to drawing 3 . Drawing 3 is a flow chart which shows retrieval demand processing.
[0074] Retrieval demand processing is processing which requires retrieval of the printing server PS from the retrieval server 200 by transmitting retrieval demand mail to the retrieval server 200, and if it

performs in CPU30, as shown in drawing 3 , it will shift to step S100 first.
[0075] At step S100, the retrieval demand mail including retrieval information is transmitted to the retrieval server 200 in an electronic mail format, and it shifts to step S102, and when it judges whether retrieval result mail was received in the electronic mail format and judged with having received retrieval result mail (Yes), it shifts to step S104.
[0076] When judged with the message of the purport which cannot judge and **** whether the message of the purport which cannot **** the printing server PS concerning a retrieval demand at step S104 is contained in retrieval result mail being contained (Yes), it shifts to step S106, the message of a purport in which the retrieval demand failed is displayed on a display 44, and a series of processings are ended.
[0077] When judged with the message of the purport which, on the other hand, cannot **** the printing server PS concerning a retrieval demand at step S104 not being contained in retrieval result mail, (No) ends a series of processings. Since the e-mail address of the printing server PS concerning a retrieval demand is contained in retrieval result mail when it ends through step S104, a user can know the e-mail address of the printing server PS concerning a retrieval demand by referring to this.
[0078] When judged with not receiving retrieval result mail in an electronic mail format at step S102, on the other hand, (No) After shifting to step S108 and transmitting retrieval demand mail, when it judges whether predetermined time (for example, 3 minutes) passed and is judged with predetermined time having passed (Yes) It shifts to step S110, the message of a purport in which the retrieval demand failed is displayed on a display 44, and a series of processings are ended.
[0079] On the other hand, at step S108, after transmitting retrieval demand mail, when it is judged with predetermined time having not passed, (No) shifts to step S102.
[0080] Next, guidance demand processing is explained to a detail, referring to drawing 4 . Drawing 4 is a flow chart which shows guidance demand processing.
[0081] Guidance demand processing is processing which requires transmission of use guidance from the printing server PS by transmitting guidance demand mail to the printing server PS ****(ed) by the retrieval server 200, and if it performs in CPU30, as shown to drawing 4 , it will shift to step S130 first.
[0082] At step S130, when transmit mail of an empty message to the printing server PS in an electronic mail format as guidance demand mail, it shifts to step S132, it judges whether guidance mail was received in the electronic mail format and it is judged with having received guidance mail (Yes), a series of processings are ended. Since the use guidance information on the printing server PS is included in guidance mail when it ends through step S132, a user can learn the usage of the printing server PS concerning a retrieval demand by referring to this.
[0083] When judged with not receiving guidance mail in an electronic mail format at step S132, on the other hand, (No) After shifting to step S134 and transmitting guidance demand mail, when it judges whether predetermined time (for example, 3 minutes) passed and is judged with predetermined time having passed (Yes) It shifts to step S136, the message of a purport in which the guidance demand failed is displayed on a display 44, and a series of processings are ended.
[0084] On the other hand, at step S134, after transmitting guidance demand mail, when it is judged with predetermined time having not passed, (No) shifts to step S132.
[0085] Next, printing demand processing is explained to a detail, referring to drawing 5 . Drawing 5 is a flow chart which shows printing demand processing.
[0086] Printing demand processing is processing which requires printing from the printing server PS by transmitting printing demand mail to the printing server PS ****(ed) by the retrieval server 200, and if it performs in CPU30, as shown in drawing 5 , it will shift to step S160 first.
[0087] At step S160, the printing demand mail containing printing formal information and print data is transmitted to the printing server PS in an electronic mail format, and it shifts to step S162, and when it judges whether the completion mail of printing was received in the electronic mail format and judged with having received the completion mail of printing (Yes), it shifts to step S164.
[0088] When judged with the message of the purport which judged and terminated abnormally whether the message of the purport which printing terminated abnormally would be contained in the completion mail of printing at step S164 being contained (Yes), it shifts to step S166, the message of a purport in which the printing demand failed is displayed on a display 44, and a series of processings are ended.
[0089] When judged with on the other hand the message of the purport which printing terminated abnormally not being contained in the completion mail of printing at step S164, (No) ends a series of processings. Since the message of the purport which printing terminated normally is contained in the completion mail of printing when it ends through step S164, a user can know what printing terminated

normally by referring to this.
[0090] When judged with not receiving the completion mail of printing in an electronic mail format at step S162, on the other hand, (No) After shifting to step S168 and transmitting printing demand mail, when it judges whether predetermined time (for example, 3 minutes) passed and is judged with predetermined time having passed (Yes) It shifts to step S170, the message of a purport in which the printing demand failed is displayed on a display 44, and a series of processings are ended.
[0091] On the other hand, at step S168, after transmitting printing demand mail, when it is judged with predetermined time having not passed, (No) shifts to step S162.
[0092] Next, the configuration of the retrieval server 200 is explained to a detail, referring to drawing 6 . Drawing 6 is the block diagram showing the configuration of the retrieval server 200.
[0093] CPU50 which controls an operation and the whole system based on a control program so that the retrieval server 200 is shown in drawing 6 , ROM52 which stores the control program of CPU50 etc. in a predetermined field beforehand, RAM54 for storing the result of an operation required of the operation process of data or CPU50 read from the ROM52 grade, CRTC56 which changes into a picture signal the data stored in the specific region of RAM54, and is outputted to a display 64, the bus 59 which is a signal line to consist of I/F58 which carries I/O of data to an external device, and for these transmit data -- mutual -- and it connects possible [data transfer].
[0094] The input device 60 which consists of a keyboard, a mouse, etc. in which an entry of data is possible as a human interface, the storage 62 which stores data, a table, etc. as a file, the display 64 which displays a screen based on a picture signal, and the signal line for connecting with a network 406 are connected to I/F58 as an external device.
[0095] CPU50 consists of a microprocessing unit MPU etc., the predetermined program stored in the predetermined field of ROM52 is started, and the registration processing and retrieval processing which are shown in the flow chart of drawing 7 and drawing 8 are performed according to the program.
[0096] Introduction and registration processing are explained to a detail, referring to drawing 7 . Drawing 7 is a flow chart which shows registration processing.
[0097] Registration processing is processing which registers the e-mail address of the printing server PS into storage 62 by receiving registration demand mail according to the registration demand, and if it performs in CPU50, as shown in drawing 7 , it will shift to step S200 first. In addition, this registration processing is equivalent to the below-mentioned registration demand processing performed in the printing servers PS1-PSn.
[0098] At step S200, when it judges whether registration demand mail was received in the electronic mail format and judged with having received registration demand mail (Yes), it shifts to step S202, but when judged, (No) stands by at step S200 until it receives registration demand mail.
[0099] At step S202, an e-mail address and the terminal description information are acquired from the received registration demand mail as registration information, and it shifts to step S204, and the acquired e-mail address is matched with the terminal description information, and it registers with storage 62, and shifts to step S206. Therefore, if registration demand mail is received from all the printing servers PS1-PSn, for every printing servers PS1-PSn, the e-mail address of the printing server PS will be matched with the terminal description information which is the printing server PS by the store 62, and will be registered into it.
[0100] At step S206, the completion mail of registration containing the message of the purport which registration completed is transmitted to the transmitting origin of registration demand mail in an electronic mail format, and a series of processings are ended.
[0101] Next, retrieval processing is explained to a detail, referring to drawing 8 . Drawing 8 is a flow chart which shows retrieval processing.
[0102] Retrieval processing is processing which searches the e-mail address of storage 62 by receiving retrieval demand mail according to the retrieval demand, and if it performs in CPU50, as shown in drawing 8 , it will shift to step S250 first. In addition, this retrieval processing is equivalent to the retrieval demand processing performed in a client 100.
[0103] At step S250, when it judges whether retrieval demand mail was received in the electronic mail format and judged with having received retrieval demand mail (Yes), it shifts to step S252, but when judged, (No) stands by at step S250 until it receives retrieval demand mail.
[0104] Retrieval information is acquired from retrieval demand mail, the e-mail address of storage 62 is searched with step S252 based on the retrieval information which shifted to step S254 and was acquired, and it shifts to step S256, and when judged with having ****(ed) the e-mail address of the printing

server PS which judges and corresponds [whether the e-mail address of the printing server PS applicable to the retrieval information was ****(ed), and] (Yes), it shifts to step S258.
[0105] At step S258, the retrieval result mail containing the e-mail address of the printing server PS which ****(ed) is transmitted to the transmitting origin of retrieval demand mail in an electronic mail format, and a series of processings are ended.
[0106] When judged with not ****(ing) the e-mail address of the printing server PS which corresponds to retrieval information at step S256 on the other hand, (No) shifts to step S260, the retrieval result mail containing the message of the purport which cannot **** the printing server PS concerning a retrieval demand is transmitted in an electronic mail format to the transmitting origin of retrieval demand mail, and a series of processings are ended.
[0107] Next, the configuration of the printing servers PS1-PSn is explained to a detail, referring to drawing 9 R> 9. Drawing 9 is the block diagram showing the configuration of the printing server PS 1. In addition, all, since each printing servers PS1-PSn have the same function and are constituted, they explain only the configuration of the printing server PS 1, and omit explanation about other things hereafter.
[0108] CPU70 which controls an operation and the whole system based on a control program so that the printing server PS 1 is shown in drawing 9 , ROM72 which stores the control program of CPU70 etc. in a predetermined field beforehand, RAM74 for storing the result of an operation required of the operation process of data or CPU70 read from the ROM72 grade, CRTC76 which changes into a picture signal the data stored in the specific region of RAM74, and is outputted to a display 84, the bus 79 which is a signal line to consist of I/F78 which carries I/O of data to an external device, and for these transmit data -- mutual -- and it connects possible [data transfer].
[0109] The input device 80 which consists of a keyboard, a mouse, etc. in which an entry of data is possible as a human interface, the store 82 which stores data, a table, etc. as a file, the indicating equipment 84 which displays a screen based on a picture signal, the airline printer 86 which prints data in space, and the signal line for connecting with a network 404 are connected to I/F78 as an external device.
[0110] CPU70 consists of a microprocessing unit MPU etc., the predetermined program stored in the predetermined field of ROM72 is started, and the registration demand processing, guidance transmitting processing, and printing processing which are shown in the flow chart of drawing 10 thru/or drawing 12 are performed according to the program.
[0111] Introduction and registration demand processing are explained to a detail, referring to drawing 10 . Drawing 10 is a flow chart which shows registration demand processing.
[0112] Registration demand processing is processing which requires registration of the printing server PS 1 from the retrieval server 200 by transmitting registration demand mail to the retrieval server 200, and if it performs in CPU70, as shown in drawing 10 , it will shift to step S300 first.
[0113] At step S300, the registration demand mail including registration information is transmitted to the retrieval server 200 in an electronic mail format, and it shifts to step S302. Here, the terminal description information which shows the e-mail address of the printing server PS 1 and the description of the printing server PS 1 is included in registration information.
[0114] At step S302, when it judges whether the completion mail of registration was received in the electronic mail format and judged with having received the completion mail of registration (Yes), a series of processings are ended. Since the message of the purport which registration of the printing server PS 1 completed is contained in the completion mail of registration when it ends through step S302, the manager of the printing server PS 1 can know that registration was completed by referring to this.
[0115] When judged with not receiving the completion mail of registration in an electronic mail format at step S302, on the other hand, (No) After shifting to step S304 and transmitting registration demand mail, when it judges whether predetermined time (for example, 3 minutes) passed and is judged with predetermined time having passed (Yes) It shifts to step S306, the message of a purport in which the registration demand failed is displayed on a display 84, and a series of processings are ended.
[0116] On the other hand, at step S304, after transmitting registration demand mail, when it is judged with predetermined time having not passed, (No) shifts to step S302.
[0117] Next, guidance transmitting processing is explained to a detail, referring to drawing 11 . Drawing 11 is a flow chart which shows guidance transmitting processing.
[0118] It is the processing which transmits use guidance to the transmitting origin of guidance demand

mail by receiving guidance demand mail according to the guidance demand, and if guidance transmitting processing is performed in CPU70, as shown to drawing 11 , it will shift to step S330 first. In addition, this guidance transmitting processing is equivalent to the guidance demand processing performed in a client 100.

[0119] At step S330, when it judges whether e-mail was received in the electronic mail format and judged with having received e-mail (Yes), it shifts to step S332, but when judged, (No) stands by at step S330 until it receives e-mail.

[0120] When it judges whether the received mail is an empty message at step S332 and is judged with it being an empty message (Yes), it shifts to step S334, the guidance mail including the use guidance information which shows use guidance of the printing server PS 1 is transmitted to the transmitting origin of e-mail in an electronic mail format, and a series of processings are ended.

[0121] On the other hand, when judged with the received mail not being an empty message at step S332, (No) shifts to step S330.

[0122] Next, printing processing is explained to a detail, referring to drawing 12 . Drawing 12 is a flow chart which shows printing processing.

[0123] Printing processing is processing which prints print data by receiving printing demand mail according to the printing demand, and if it performs in CPU70, as shown in drawing 12 R> 2, it will shift to step S360 first. In addition, this printing processing is equivalent to the printing demand processing performed in a client 100.

[0124] At step S360, when it judges whether printing demand mail was received in the electronic mail format and judged with having received printing demand mail (Yes), it shifts to step S362, but when judged, (No) stands by at step S360 until it receives printing demand mail.

[0125] At step S362, printing formal information and print data are acquired from the received printing demand mail, and it shifts to step S364, and based on the acquired printing formal information, print data are printed with an airline printer 86, and it shifts to step S366.

[0126] The completion mail of printing containing the message of the purport that shifted to step S368 and printing terminated normally with step S366 whether printing was completed normally when it judged and was judged with printing having been completed normally (Yes) is transmitted in an electronic mail format to the transmitting origin of printing demand mail, and a series of processings are ended.

[0127] On the other hand, at step S366, when judged with printing not being completed normally, (No) shifts to step S370, transmits the completion mail of printing containing the message of the purport which printing terminated abnormally in an electronic mail format to the transmitting origin of printing demand mail, and ends a series of processings.

[0128] Next, actuation of the gestalt of the above-mentioned implementation is explained, referring to drawing 13 thru/or drawing 16 .

[0129] The case where introduction and the new printing server PS are registered into the retrieval server 200 is explained referring to drawing 13 . Drawing 13 is drawing showing the contents of registration demand mail.

[0130] When it is going to register the new printing server PS (for example, the printing server PS 1) into the retrieval server 200, in the printing server PS 1, a manager creates the registration demand mail including registration information. Creation of registration demand mail transmits the created registration demand mail to the retrieval server 200 through step S300.

[0131] Registration demand mail is created by indicating "lookup@aaa.com" which is the e-mail address of the retrieval server 200 to the written field 300 of the destination, indicating the character string "register" which shows that it is registration demand mail to the written field 302 of a subject name, and indicating registration information to the written field 304 of a message, as shown in drawing 13 . As registration information, "MailAddress" which shows an e-mail address, and the terminal description information 310 which shows the description of the printing server PS 1 are included. "Location" which shows the installation of a device which offers service as terminal description information 310 with "Name" which shows the name of service, "Device" which shows the class of device which offers service, "Format" which shows the data format which can be printed, and "PaperSize" which shows the paper size which can be printed, for example is contained.

[0132] In the example of drawing 13 , "MailAddress" is set as "printer@xxx.com" which is the e-mail address of the printing server PS 1, and it is set as "PrinterService" which shows that the service whose printing server PS 1 offers "Name" is printing service, and is set as "Printer" which shows that the

device which offers service of the printing server PS 1 </SUB> for "Device" is an airline printer. Moreover, "Format" is set as "jpeg" which shows the data format which can print the printing server PS 1, "PaperSize" is set as "A4" which is the paper size which can print the printing server PS 1, and "Location" is set as "XXX Building" which is the installation of a device which offers service of the printing server PS 1.
[0133] In the retrieval server 200, if registration demand mail is received, through steps S202 and S204, an e-mail address "printer@xxx.com" and the terminal description information are acquired from the received registration demand mail as registration information, and the acquired e-mail address "printer@xxx.com" will be matched with the terminal description information, and will be registered into storage 62. Completion of registration transmits the completion mail of registration containing the message of the purport which registration completed to the printing server PS 1 through step S206.
[0134] In the printing server PS 1, if the completion mail of registration is received, since the message of the purport which registration completed is contained in the received completion mail of registration, a manager can know that registration was completed by referring to this.
[0135] In addition, even if it case or reaches, when [which did not reach to the retrieval server 200 by a certain cause in the registration demand mail transmitted from the printing server PS 1] a defect is in the contents of registration demand mail and registration is not completed in the retrieval server 200, in the printing server PS 1, the message of the purport that the registration demand failed is displayed through step S306. A manager can know what the registration demand went wrong by referring to this.
[0136] Next, the case where the printing server PS is searched in a client 100 using the retrieval server 200 is explained, referring to drawing 14 . Drawing 14 is drawing showing the contents of retrieval demand mail.
[0137] When it is going to search the printing server PS in a client 100 using the retrieval server 200, in a client 100, a user creates the retrieval demand mail including retrieval information. Creation of retrieval demand mail transmits the created retrieval demand mail to the retrieval server 200 through step S100.
[0138] Retrieval demand mail is created by indicating "lookup@aaa.com" which is the e-mail address of the retrieval server 200 to the written field 300 of the destination, indicating the character string "search" which shows that it is retrieval demand mail to the written field 302 of a subject name, and indicating retrieval information to the written field 304 of a message, as shown in drawing 14 . "Device" which shows the class of device which offers the service which it is going to use as retrieval information is contained. Of course, in addition to this, what is contained in the terminal description information 310 can be made into retrieval information, respectively.
[0139] In the example of drawing 14 , it is set as "Printer" which shows that the device which offers the service which is going to use "Device" is an airline printer.
[0140] If retrieval demand mail is received, through steps S252 and S254, retrieval information "Printer" will be acquired from retrieval demand mail, and the e-mail address of storage 62 will be searched with the retrieval server 200 based on the acquired retrieval information. Consequently, as the address of the printing server PS applicable to retrieval information "Printer", if the e-mail address "printer@xxx.com" of the printing server PS 1 should be ****(ed), the retrieval result mail containing the e-mail address "printer@xxx.com" ****(ed) through steps S256 and S258 will be transmitted to a client 100.
[0141] In a client 100, if retrieval result mail is received, since the e-mail address "printer@xxx.com" of the printing server PS concerning a retrieval demand is contained in received retrieval result mail, a user can know the e-mail address of the printing server PS concerning a retrieval demand by referring to this.

[0142] In addition, when the retrieval demand mail transmitted from the client 100 does not reach the retrieval server 200 according to a certain cause, Even if reached, when a defect is in the contents of retrieval demand mail and retrieval is not completed in the retrieval server 200, Or when the e-mail address of the printing server PS applicable to retrieval information is not ****(ed), in a client 100, the message of a purport in which the retrieval demand failed is displayed through step S106 or step S110. A user can know what the retrieval demand went wrong by referring to this.
[0143] Next, the case where the use guidance of the printing server PS 1 searched with the retrieval server 200 in the client 100 comes to hand is explained, referring to drawing 15 . Drawing 15 is drawing showing the contents of guidance mail.
[0144] When the use guidance of the printing server PS 1 searched with the retrieval server 200 in the client 100 tends to come to hand, in a client 100, a user creates guidance demand mail. Creation of

guidance demand mail transmits the created guidance demand mail to the printing server PS 1 through step S130. Guidance demand mail is created by indicating "printer@xxx.com" which is the e-mail address of the searched printing server PS 1 retrieval server 200 to the written field of the destination, and indicating nothing to the written field of a message, although not illustrated.

[0145] In the printing server PS 1, reception of mail of an empty message transmits the guidance mail including the use guidance information which shows use guidance of the printing server PS 1 to a client 100 through step S.

[0146] As guidance mail is shown in drawing 15 , the use guidance information 320 is indicated to the written field 304 of a message. "Orientation" which shows the printing direction over a form as use guidance information 320, "PaperSize" which shows the paper size which can be printed, "Number" which shows maximum number of copies which can be printed, and "Layout" which shows a page rate are contained.

[0147] The example of drawing 15 shows that the printing direction over a form is selectable in a lengthwise direction "portrait" or a longitudinal direction "landscape" as "Orientation". As "PaperSize" It is shown that it is selectable in A4 size "A4" or letter size "Letter". As "Number" It is shown that maximum number of copies which can be printed is "100", and it is shown as "Layout" that it is selectable in one division "1-up", two division "2-up", or trichotomy "3-up." Namely, to the printing server PS 1, a printing format can be specified in this range. In addition, the e-mail address of the printing server PS 1 is set to the reply address, and the input of the e-mail address of the printing server PS 1 can be omitted only by clicking the reply carbon button 306.

[0148] In a client 100, if guidance mail is received, since use guidance information is included in the received completion mail of guidance, a user can learn the usage of the printing server PS 1 by referring to this.

[0149] In addition, even if it case or reaches, when [which did not reach to the printing server PS 1 by a certain cause in the guidance demand mail transmitted from the client 100] a defect is in the contents of guidance demand mail and the printing server PS 1 is not able to transmit guidance mail, in a client 100, the message of the purport that the guidance demand failed is displayed through step S136. A user can know what the guidance demand went wrong by referring to this.

[0150] Next, the case where the printing service which the printing server PS 1 searched with the retrieval server 200 in the client 100 offers is used is explained, referring to drawing 16 . Drawing 16 is drawing showing the contents of printing demand mail.

[0151] When it is going to use the printing service which the printing server PS 1 searched with the retrieval server 200 in the client 100 offers, in a client 100, a user creates the printing demand mail containing printing formal information and print data. Creation of printing demand mail transmits the created printing demand mail to the printing server PS 1 through step S160.

[0152] As printing demand mail is shown in drawing 16 , while indicating "printer@xxx.com" which is the e-mail address of the printing server PS 1 to the written field 300 of the destination, indicating the character string "print" which shows that it is printing demand mail to the written field 302 of a subject name and indicating the printing formal information 330 to the written field 304 of a message, it creates by attaching the file "print-data .jpg" used as print data 332 to the attached item 308. "Orientation" which shows the printing direction over a form as printing formal information, "PaperSize" which shows the paper size which can be printed, "Number" which shows maximum number of copies which can be printed, and "Layout" which shows a page rate are contained.

[0153] It is set as "portrait" which shows that the printing direction [as opposed to a form for "Orientation"] is a lengthwise direction in the example of drawing 16 , is set as "A4" which shows that a paper size is A4 size about "PaperSize", is set as "2" which shows that printing number of copies is the two sections about "Number", and is set as "2-up" which shows that page rates are two division about "Layout."

[0154] In the printing server PS 1, if printing demand mail is received, through steps S362 and S364, printing formal information and print data will be acquired, and print data will be printed with an airline printer 86 based on the acquired printing formal information from the received printing demand mail. After printing is completed normally, the completion mail of printing containing the message of the purport which printing terminated normally is transmitted to a client 100 through steps S366 and S368.

[0155] In a client 100, if the completion mail of printing is received, since the message of the purport which printing terminated normally is contained in the received completion mail of printing, a user can know what printing terminated normally by referring to this.

[0156] In addition, when the printing demand mail transmitted from the client 100 does not reach the printing server PS 1 according to a certain cause, Even if reached, when a defect is in the contents of printing demand mail and printing is not completed in the printing server PS 1, or when printing is not normally completed by the printing server PS 1 In a client 100, the message of a purport in which the printing demand failed is displayed through step S166 or step S170. A user can know what the printing demand went wrong by referring to this.
[0157] With the gestalt of this operation, thus, the retrieval server 200 When retrieval demand mail is received, retrieval information is acquired from the received retrieval demand mail. When the e-mail address of the printing server PS which searches the e-mail address of a store 62 based on the acquired retrieval information, and corresponds to the retrieval information is ****(ed) The retrieval result mail containing the e-mail address which ****(ed) is transmitted to the transmitting origin of retrieval demand mail. Each printing servers PS1-PS2 When printing demand mail was received, from the received printing demand mail, printing formal information and print data are acquired, and print data were printed based on the acquired printing formal information.
[0158] Thereby, between a client 100 and the printing server PS, since an informational exchange is performed by E-mail, in order to use the printing servers PS1-PSn, and even when the new printing server PS is connected to a network, it is not necessary to incorporate a driver by the client 100. Furthermore, between a client 100 and the printing server PS, since an informational exchange is performed by E-mail, by the client 100, the printing server PS connected to the network of not only a small-scale network but a wide area can be used. Furthermore, in a client 100, if even the e-mail address of the retrieval server 200 is grasped, even if it does not grasp the e-mail address of the printing servers PS1-PSn, the printing service which the printing servers PS1-PSn offer can be used.
[0159] Therefore, as compared with the former, the printing service which the printing servers PS1-PSn offer can be advantageously used in respect of time and effort or time amount.
[0160] With the gestalt of this operation, furthermore, each printing servers PS1-PSn The registration demand mail including the terminal description information which shows the e-mail address of the printing server PS and the description of the printing server PS is transmitted to the retrieval server 200. When registration demand mail was received, the retrieval server 200 matches with the terminal description information the e-mail address which acquired an e-mail address and the terminal description information, and was acquired from the received registration demand mail, and registered it into storage 62.
[0161] Since a setup is not separately needed by the client 100 side even if the new printing server PS is connected to a network while registration of the new printing server PS becomes easy, since the printing server PS is registered into the retrieval server 200 only by transmitting registration demand mail by this, the convenience of a client 100 can be improved.
[0162] Furthermore, when guidance demand mail was received, the guidance mail including the use guidance information which shows use guidance of the printing server PS was made for each printing servers PS1-PSn to transmit to the transmitting origin of guidance demand mail at the gestalt of this operation.
[0163] Thereby, in a client 100, even if it does not grasp beforehand the usage of the printing servers PS1-PSn, the printing service which the printing servers PS1-PSn offer can be used.
[0164] Furthermore, with the gestalt of this operation, each printing servers PS1-PSn set the e-mail address of the printing server PS as the reply address in guidance mail.
[0165] Since the input of the e-mail address of the printing server PS can be omitted by this when creating printing demand mail, the convenience of a client 100 can be improved.
[0166] In the gestalt of the above-mentioned implementation, the retrieval server 200 corresponds to a retrieval terminal according to claim 1, 2, 3, 5, 6, or 9, storage 62 corresponds to a storage means according to claim 1, 2, 3, 5, 6, or 9, and steps S200, S206, S250, S258, and S260 support the e-mail transceiver means according to claim 1, 2, or 3. Moreover, steps S202 and S252 correspond to the information acquisition means of a retrieval terminal according to claim 1, 2, or 3, step S254 corresponds to a retrieval means according to claim 1 or 2, and step S204 supports the registration means according to claim 3.
[0167] Moreover, in the gestalt of the above-mentioned implementation, the printing servers PS1-PSn correspond to a printing terminal claims 1 and 5, a processing terminal given in seven, claims 2, 3, 4, 6, 8, and 9, or given in ten, and steps S302, S330, and S360 support the e-mail receiving means according to claim 1, 2, or 4. Moreover, steps S300, S334, S368, and S370 correspond to an e-mail transmitting

means according to claim 3 or 4, an airline printer 84 corresponds to a service provision means according to claim 1, claims 2 and 8, or an output means given in ten, and step S362 supports the information acquisition means of a printing terminal according to claim 2.

[0168] In addition, although the case where the control program with which it is in charge of performing the retrieval demand processing, the guidance demand processing, and the printing demand processing which are shown in the flow chart of drawing 3 thru/or drawing 5 in the gestalt of the above-mentioned implementation with the control program, and the gap is also beforehand stored in ROM32 is performed explained, it may be made the program performing by reading to RAM34 from the storage with which the program not only this but these procedures were shown was memorized.

[0169] Moreover, although the case where the control program with which it is in charge of performing the registration processing and the retrieval processing which are shown in the flow chart of drawing 7 and drawing 8 in the gestalt of the above-mentioned implementation with the control program, and the gap is also beforehand stored in ROM52 was performed was explained, from the storage with which the program which showed not only this but these procedures was memorized, the program is read into RAM54 and it may be made to perform it.

[0170] Moreover, although the case where the control program with which it is in charge of performing the registration demand processing, the guidance transmitting processing, and the printing processing which are shown in the flow chart of drawing 10 thru/or drawing 12 in the gestalt of the above-mentioned implementation with the control program, and the gap is also beforehand stored in ROM72 is performed explained, it may be made the program performing by reading to RAM74 from the storage with which the program shown not only in this but in these procedures was memorized.

[0171] Here, storages are a magnetic storage mold / optical reading method storages, such as optical reading method storages, such as magnetic storage mold storages, such as semi-conductor storages, such as RAM and ROM, and FD, HD, and CD, CDV, LD, DVD, and MO, and if it is the storage which can be read by computer regardless of an approach to read magnetic and optical **, they are electronic and a thing containing all storages.

[0172] Moreover, as shown in drawing 1 , the storage which memorized the service use support system concerning this invention, a retrieval terminal, the processing terminal, the printing terminal, the storage that memorized the retrieval program, and the output program in the gestalt of the above-mentioned implementation In a client 100, although applied about the case where the printing service which the printing servers PS1-PSn offer by exchanging information by E-mail is used, in other cases, it is applicable in the range which does not deviate from the main point of not only this but this invention.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the block diagram showing the configuration of the network system which applies this invention.
[Drawing 2] It is the block diagram showing the configuration of a client 100.
[Drawing 3] It is the flow chart which shows retrieval demand processing.
[Drawing 4] It is the flow chart which shows guidance demand processing.
[Drawing 5] It is the flow chart which shows printing demand processing.
[Drawing 6] It is the block diagram showing the configuration of the retrieval server 200.
[Drawing 7] It is the flow chart which shows registration processing.
[Drawing 8] It is the flow chart which shows retrieval processing.
[Drawing 9] It is the block diagram showing the configuration of the printing server PS 1.
[Drawing 10] It is the flow chart which shows registration demand processing.
[Drawing 11] It is the flow chart which shows guidance transmitting processing.
[Drawing 12] It is the flow chart which shows printing processing.
[Drawing 13] It is drawing showing the contents of registration demand mail.
[Drawing 14] It is drawing showing the contents of retrieval demand mail.
[Drawing 15] It is drawing showing the contents of guidance mail.
[Drawing 16] It is drawing showing the contents of printing demand mail.
[Description of Notations]
100 Client
150 Mail Server
200 Retrieval Server
PS Printing server
400-406 Network
30,50,70 CPU
32,52,72 ROM
34,54,74 RAM
40, 60, 80 Input unit
42, 62, 82 Storage
44, 64, 84 Display
86 Airline Printer

* NOTICES *

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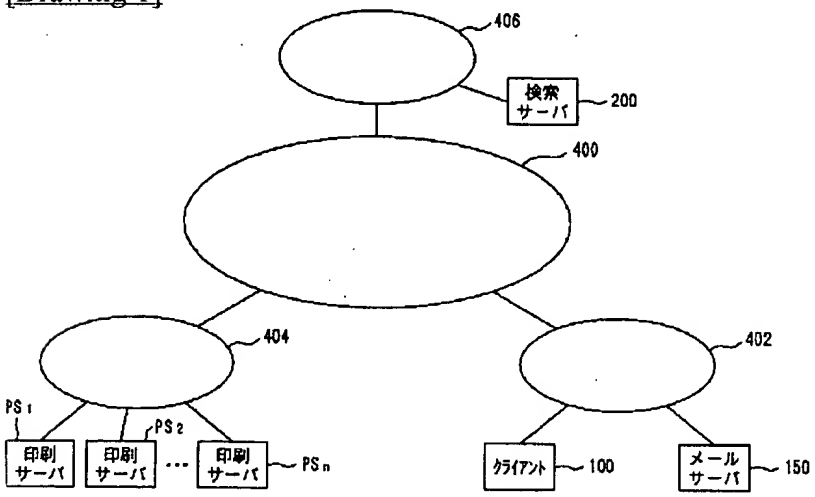
damages caused by the use of this translation.

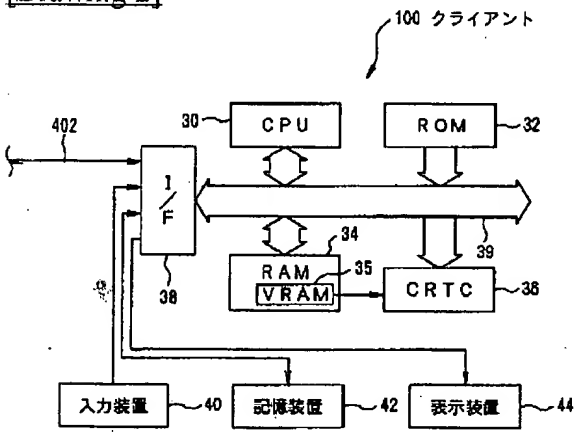
1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

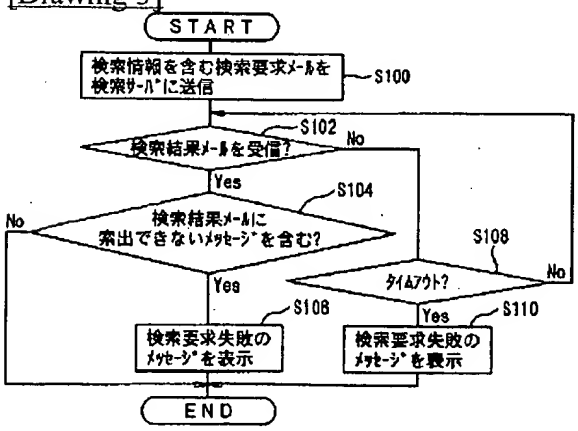
[Drawing 1]



[Drawing 2]



[Drawing 3]



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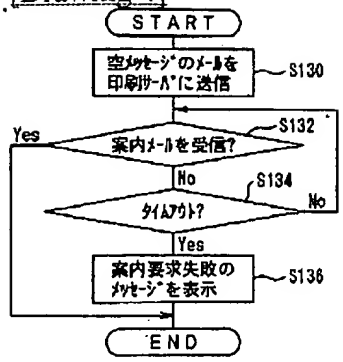
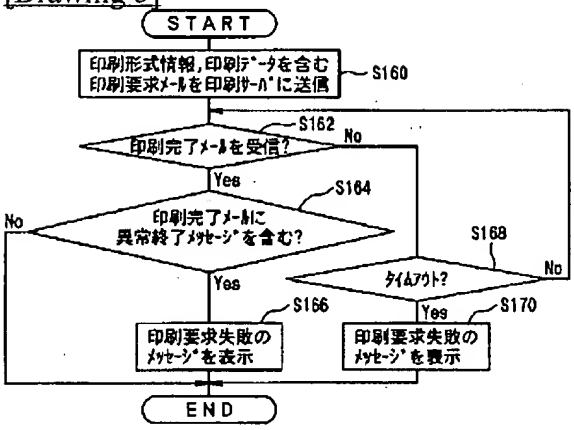


[Drawing 5]



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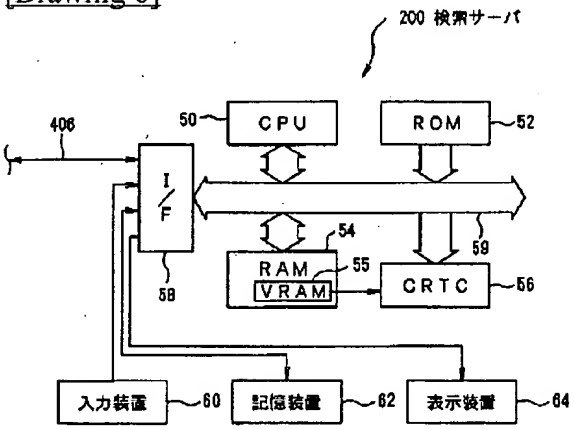
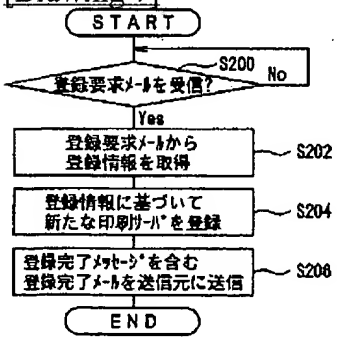
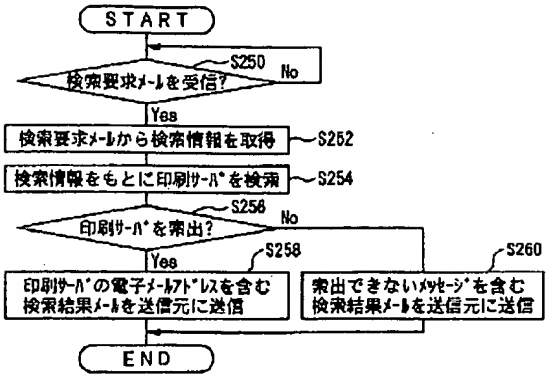


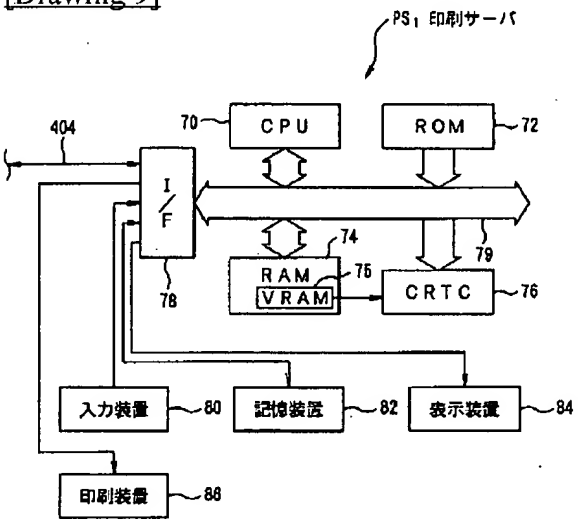
[Drawing 7]



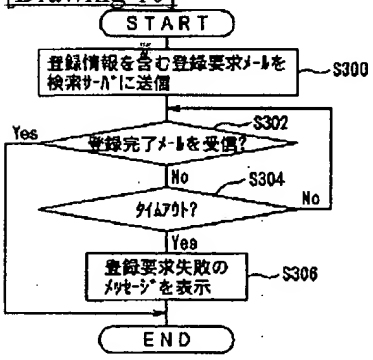
[Drawing 8]



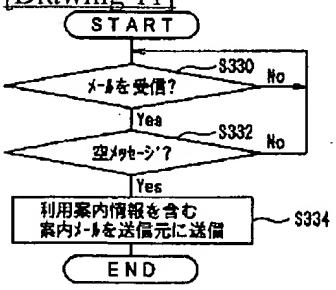
[Drawing 9]



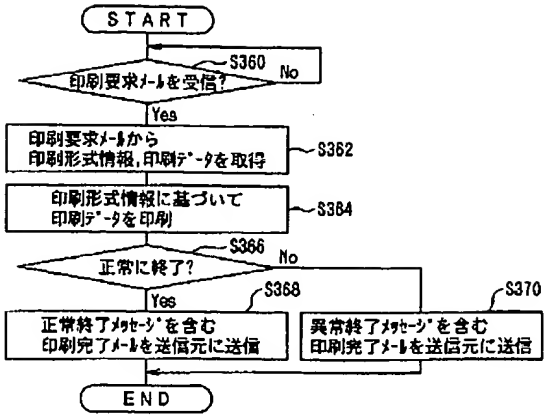
[Drawing 10]



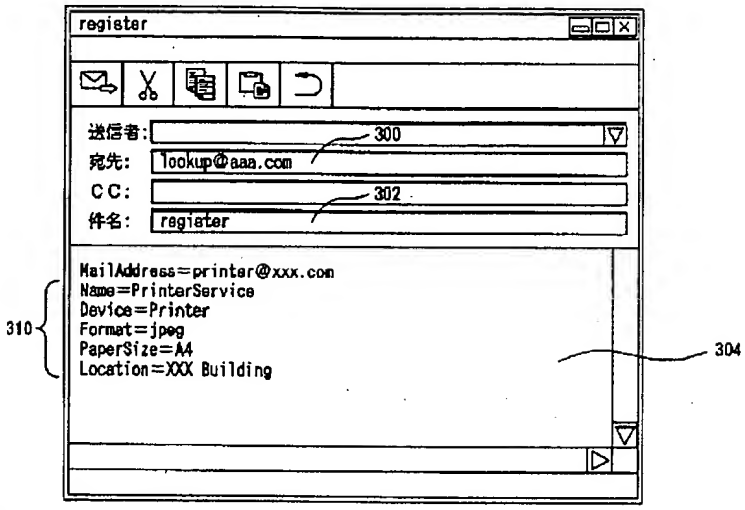
[Drawing 11]



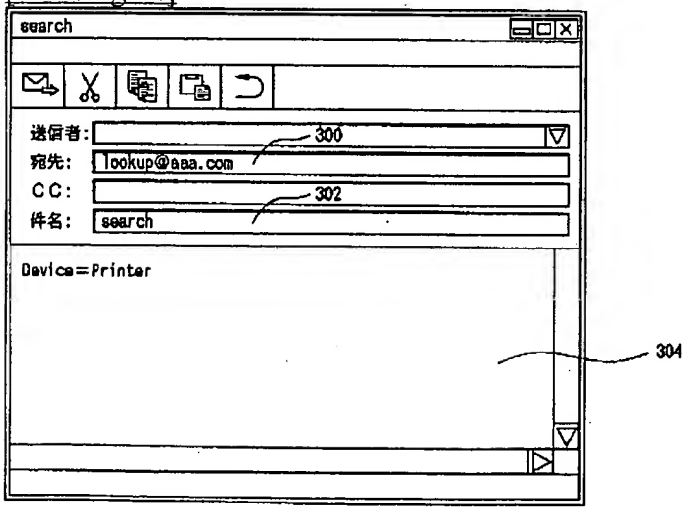
[Drawing 12]



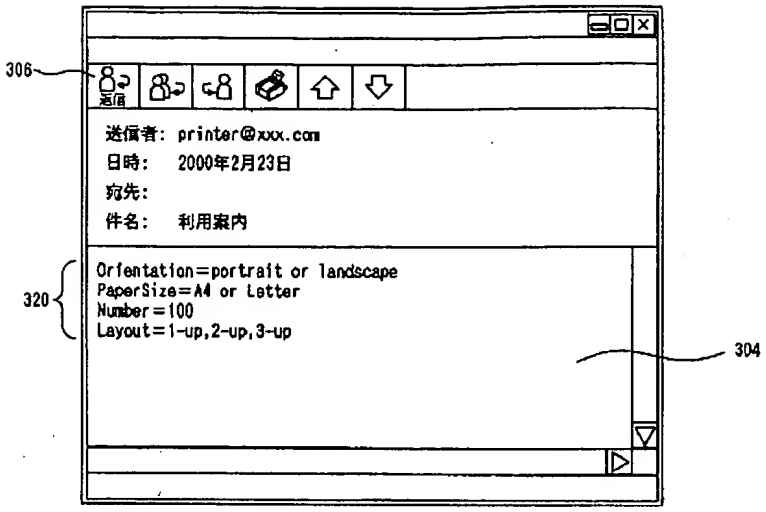
[Drawing 13]



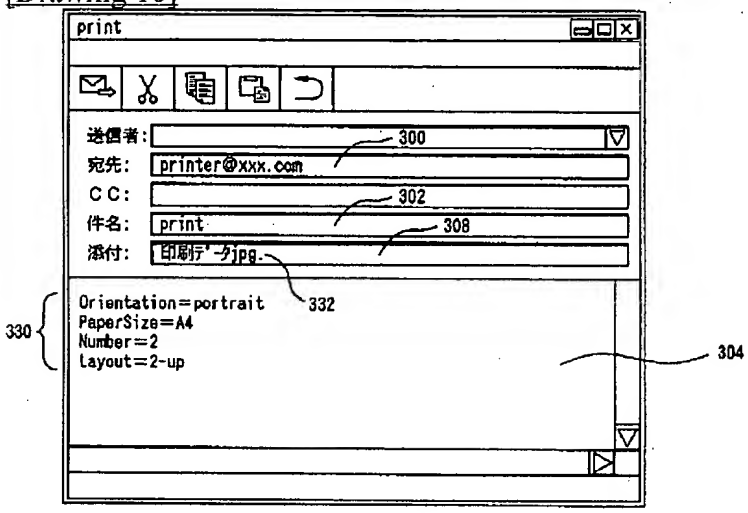
[Drawing 14]



[Drawing 15]



[Drawing 16]



[Translation done.]